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THE

WORKS

OF

JEREMY BENTHAM,

PUBLISHED UNDER THE SUPERINTENDENCE OF
HIS EXECUTOR,

JOHN BOWRING.

VOLUME VIII.

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CHRESTOMATHIA:

BEING

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EXTENSION OF THE NEW SYSTEM OF INSTRUCTION TO THE HIGHER BRANCHES OF LEARNING,

FOR THE USE OF THE MIDDLING AND HIGHER RANKS IN LIFE.

BY JEREMY BENTHAM.

FIRST PUBLISHED IN 1816,
AND NOW REPRINTED, WITH ADDITIONS, FROM THE ORIGINAL MSS.

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INTRODUCTION BY THE EDITOR.

Mr Bentham was one of the first to recognise the extraordinary improvement in the method of instruction developed by Mr Lancaster and modified and extended by Dr Bell. The account of the results attending its application to the acquisition of language, given by several eminent teachers from their own actual trial of it, and more especially the statements of Dr Russel, then Head-master of the Charter-house School, and of Mr Pillans and Mr Gray, masters of the High School of Edinburgh, (Appendix No. 2. and 3. pp. 59 and 61)—made a strong impression on Mr Bentham's mind. If it were true, as stated by Dr Russel, that since he had introduced into the Charter-house School books prepared on the simple principle of the Madras System, no boy had ever passed a sentence of which he was ignorant, nor been flogged on the ground of his learning; if it were true, as stated by Mr Gray, that since he had introduced this system into his school, his whole class had gained a more extensive knowledge of the Latin language than he had ever known on any former occasion; that *not a single boy* had failed; that it had enabled him *entirely to abolish corporal punishment*; that it had animated his whole school with one spirit, making them all advance in the intellectual career with the like ardour, and though not with equal success, without *a single failure*, and that Mr Lancaster had put into his hands an instrument which had enabled him to realize his fondest visions in his most sanguine mood;*—if such results were obtained by the application of this instrument to the acquisition of Latin and Greek, what, said Mr Bentham, may not be expected from its application to the whole field of knowledge? Are there not several branches to which it might be applied with still greater advantage than to language; and is there one which does not afford the promise of at least equal success?

Mr Bentham thought that these questions must be answered in the affirmative, and the great interest which he naturally took in this subject, was strengthened by the desire expressed by some friends of his, among whom were several statesmen and men of wealth, that the experiment should be tried; that a Day School should be opened for the children of the middle and higher classes, in which the principles of the new method should be applied, not only to the teaching of language, but of all the other branches of instruction which are ordinarily included in the curriculum of the highest schools. With his usual ardour, Mr Bentham immediately proposed that the school-house should be erected in his own garden, and that he himself should take a chief part in the superintendance of the school; at the same time his opulent friends agreed to supply the requisite funds.

But these arrangements having been determined on, Mr Bentham now saw that the most difficult part of the undertaking still remained to be accomplished. It was necessary to bring out the principles of the new method more distinctly than had yet been done, and to shape them into so many instruments, each capable of being applied, by ordinary hands, to its specific use: it was equally necessary to review the whole field of knowledge in order to ascertain to what branches of instruction these instruments might be applied with the greatest promise of success; and to what, if any, their application should not be attempted.

The accomplishment of such a project was well calculated to call forth all the energies of Mr Bentham's mind, and he immediately applied himself to the work. In the meantime, this new school and the devotion of Mr Bentham to the development of the plan of it, became matter of conversation among the philosophers, statesmen, and friends to education of the day. The determination which had been come to, to exclude Theology from the curriculum of instruction, on the ground that its inclusion would be pregnant with exclusion, was also very generally discussed. Alarm was taken at the rumour of this omission; and clerical influence was brought to bear upon the minds of some of the more opulent persons who had encouraged the project, with the ultimate result of causing them to abandon it. However he might regret the loss of support which had been so readily and confidently assured to him, Mr Bentham was not on that account to be turned aside from his purpose. He resolutely persevered in the completion of his part of the compact; and hence although there is no school in the garden of Queen Square Place, yet we have the Chrestomathia.

Whatever other useful purposes may result from the intellectual labour which has been spent upon the production of these papers, it will be found that they are capable of affording special and invaluable assistance to two different classes of persons. First to him who is desirous of developing and strengthening his own intellectual faculties, and of rendering his

* The essential excellence of this system is not lessened by its having been found to be practicable, after experience in the working of it, to improve the *monitorial* part of it.

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mind capable of making some progress in the field of original thought and invention, and of extending the domain of science. Such a person should give his days and nights to the study of the instrument described in Appendix, p. 101—128, (and further illustrated in the work on Logic, p. 253 *et seq.*,) and to actual practice with it. There is no intellectual gymnasium from exercise in which a powerful mind will derive so great an accession of strength.

Secondly, to him who is desirous of improving the character of elementary school-books. In the first number of the *Westminster Review*, in an elaborate article written nearly twenty years ago, on the Chrestomathia, after an attempt to show, that, for perfect instruction in all the physical sciences, as well as in geometry, algebra, and language, nothing is requisite but elementary books adapted to the new system, the writer asks whether "it be too much to hope, that there are men of science, whose benevolence will induce them to undertake a labour which, humble as it may appear, can be performed only by a philosophical mind which has thoroughly mastered the art and science to be taught. Can any scholar be more nobly employed than in writing such a book on language? or any natural, moral, or political philosopher, than in disclosing to the youthful understanding, in the most lucid order, and in the plainest terms, the profound, which are always the simple, principles of his respective science."

Since Mr. Bentham wrote, the perception, in the public mind, has become more clear and strong, of the folly of consuming more than three-fourths of the invaluable time appropriated to education, "in scraping together," as Milton expresses it, "so much miserable Greek and Latin," by persons of the middle classes, to whom it is of no manner of use; to whose pursuits it bears no kind of relation; who, after all, acquire it so imperfectly, as to derive no pleasure from the future cultivation of it; who invariably neglect it as soon as they are released from the authority of school; and, in the lapse of a few years, allow every trace of it to be obliterated from the memory. Not only is it now generally admitted, that the subject-matter of instruction for these classes should consist of the physical sciences, as well as of language, but it is, moreover, beginning to be perceived, that some advantages would result to the community from opening the book of knowledge to the very lowest of the people; that everything which it is desirable to teach even the masses, is not comprehended in the facts, that there is a devil, a hell, a so-called heaven, a Sunday, and a church, but that there are things worthy of their attention connected with the objects of this present world,—the properties and relations of the air they breathe, the soil they cultivate, the plants they rear, the animals they tend, the materials they work upon in their different trades and manufactures,—the instruments with which they work,—the machinery by which a child is able to produce more than many men, and a single man to generate, combine, control, and direct a physical power superior to that of a thousand horses. There is a growing conviction, that the communication of knowledge of this kind to the working classes would make them better and happier men; and that the possession of such knowledge by these classes would be attended with no injury whatever to any other class. The want of elementary books is therefore becoming every day more urgent; nothing has yet been done to supply them; and yet here, in the Chrestomathia, there is a mine from which any competent hand might dig the material, and fashion the instrument.

The comprehensiveness of the view taken by one and the same mind, of every subject included in such a work as the Chrestomathia, cannot be expected to be equal; nor were all the subjects treated of by Mr Bentham left by him in a state which he regarded as complete. The papers which relate to Geometry and Algebra, in particular, appeared to require revision; and the Editor thought it right to place them for that purpose in the hands of a universally acknowledged master of these sciences. After a careful examination of these manuscripts by this gentleman, they were returned to the Editor, with the following observation:—"That although much has been done in relation to these subjects, on many of the points treated of by Mr Bentham, since the time at which he wrote, or so shortly before it, that he could not know of it; and though his views of first principles were unmatured by the consideration of their highest results, yet the publication of these papers, without alteration or omission, is still desirable, as exhibiting many useful, and several original, trains of thought; and offering many suggestions, of which, though some are imperfect, and others obsolete, the greater number may furnish matter for reflection even to those who have made the exact sciences more their special study than did Mr Bentham."

Several passages in this work will appear obscure, and a few perhaps unintelligible, owing to the occurrence in the manuscript of some words, so illegible, that those best acquainted with Mr Bentham's hand-writing have been unable to decypher them. The only liberty taken with the manuscript has been that of supplying, in these comparatively few cases, the best conjectural word that could be imagined. It has been deemed a duty to publish these papers in the state in which Mr Bentham left them, it being no part of the office of an Editor to intermeddle with the thoughts and expressions of the author.

SOUTHWOOD SMITH.

LONDON, *May*, 1841.

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CHRESTOMATHIA.

FIRST PREFACE TO THE FIRST EDITION.

From the determination to employ the requisite mental labour, in addition to the requisite pecuniary means, in the endeavour to apply the newly invented system of instruction, to the ulterior branches of useful learning, followed the necessity of framing a scheme of instruction for the school, in which it was proposed that the experiment should be made.

From the necessity of framing this scheme, followed the necessity of making a selection among the various branches of learning—art-and-science-learning, as well as language-learning included.

From the necessity of making this selection, followed the necessity of taking a comprehensive—howsoever slight, and unavoidably hasty—survey, of the whole field.

In the course of this survey, several ideas presented themselves, of which some had for some forty or forty-five years been lying dormant, others were brought into existence by the occasion: and, which, appearing to afford a promise of being, in some degree, capable of being rendered subservient to the present design, were—after inquiry among books and men—supposed to have in them more or less of novelty, as well as use.

Introduced, though necessarily in a very abridged form, into the present collection of papers, they will, it is hoped, be productive of one effect—nor will it be deemed an irrelevant one—viz. the contributing to produce—in the breasts of the persons concerned, whether in the character of parents and guardians, or in the character of contributors to the fund necessary for the institution of the proposed experimental course, the assurance that, on the part of the proposed conductors, howsoever it may be in regard to ability, neither zeal nor industry are wanting: and that, having undertaken for the applying, to this, in some respects superior purpose, according to the best of their ability, the powers of the newly invented and so universally approved intellectual machine—their eyes, their hearts, and their hands will continue open, to every suggestion, that shall afford a prospect, of being in any way contributory, to so universally desirable an effect.

In regard to such part of Table II. as regards the PRINCIPLES of the *New Instruction System*, though of the *matter* itself, no part worth mentioning belongs to the author of the other parts, nor to any person other than those benefactors of mankind, whose title to it stands acknowledged by a perpetual chain of references—yet, in respect of the *arrangement*, which is altogether new, and the compression, which is studiously close—such is the convenience, which, it is hoped, will be found derivable from the summary, which (though for an ulterior and somewhat different purpose) is here given of it, that—even were this the only use of that summary—the labour here expended, though upon a soil already so rich, would not, it is hoped, be regarded as having been altogether unprofitably bestowed.

SECOND PREFACE TO THE FIRST EDITION.

In the Table of Contents, to wit in that part of it which regards the Appendix, the number of articles mentioned will be observed to be ten. Of these no more than four can at the present conjuncture be delivered. They have, however, been all of them written at least once over: and the fifth, which is longer than all the following ones put together, is completed for the press, and wants not much of being all printed. The rest, to fit them for the press, want nothing but to be revised.* How long, or how short soever, may be the portion of time still requisite for giving completion to the work, the purpose for which it was written admitted not ulterior delay, in the publication of such part of it as was in readiness. With

* The papers here spoken of, as not having been completed for the first edition, are incorporated in this edition.—*Ed.*

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reference to the main purpose, it may, however, without any very material misconception, be considered as complete. In what is now made public will be found everything that can be considered as essential to the development of the plan of instruction. What remains is little more than what seemed necessary to give expression to a few ideas of the author's own, relative to the subjects which will be found mentioned: ideas, so far as he knows, peculiar to himself, and which had presented themselves as affording a hope of their giving, in different ways, more or less additional facility to the accomplishment of the useful purposes in view.

Time enough for their taking their chance for helping to recommend the plan, to the notice of such persons to whom, in the hope of obtaining their pecuniary assistance, the plan will come to be submitted, it has not been possible for him to get it in readiness: but, from the general intimation given of the topics in the Table of Contents, may be seen what is in view; and from the *first Preface*, together with what has just been said in this *second*, what progress has been made in it. Whatsoever assistance it may be found capable of contributing towards the accomplishment of the general object, thus much the reader may be assured of, viz. that, if life and faculties continue, everything that has thus been announced will be before the public in a few months, and long enough before the course of instruction can have placed any of its scholars in a condition to reap any benefit that may be found derivable from it.

Of this Appendix, No. I. is occupied by a paper there styled *Chrestomathic Proposal*. In concert with the public-spirited men, with whom the idea of the enterprise had originated, it was drawn up, at a time when it was thought that, by the circulation of that paper, such a conception of the plan might be afforded as might be sufficient for the obtaining such assistance as, either from pecuniary contributions, or from additional managing hands, should be found requisite. After the paper was printed in the form and in the place in which it will be seen, intervening incidents, and ulterior considerations having suggested various particulars, as being requisite—some to be added, others to be substituted—the task of drawing up a paper for this purpose, was undertaken by other hands. It will be seen, however, that *the plan of instruction* referred to being exactly the same, what difference there is turns upon no other point than some of those which relate to the *plan of management:* and even of these matters, as contained in the more recent paper in question, several will, it is believed, be found to receive more or less of explanation from the anterior paper, which, as above, will be seen reprinted in these pages.

On the length of the interval—which, between the printing of the *Preface*, and the sending to the press this Supplement to it, has elapsed—the author, though he has the satisfaction of thinking the commencement of the enterprise has not been retarded by it, cannot, on his own account, reflect without regret, nor altogether without shame. Under this pressure, his good fortune has, however, as will presently be seen, brought to him a consolation, superior to everything to which his hopes could have raised themselves.

The delay in question has had for its source the paper which, in the contents of the Appendix to this tract, will be seen distinguished by No. V. [IV.], and to which, at the top of each page, for a running title, the words, *On Nomenclature and Classification*, or *On the Construction of Encyclopedical Trees*—had been destined, but came too late to be employed. Of the number of sections which it contains, all but the 12th had been completed for the press, and all down to the 12th exclusive been delivered from the press—when, from a recent publication, a passage, of which what follows is a reprint, was put into the author's hands.

In it the reader will observe—and from an official hand of the first celebrity—a *certificate of difficulty*, indeed of something *more* than *difficulty*, applied to the very work, of which, in and by this same 12th section, the execution has been attempted. It will be found, in Volume I. of the Appendix to the new edition, termed, on the cover, the 4th and 5th, of the *Edinburgh Encyclopedia Britannica:* date on the cover, December 1815. It commences at the very commencement of the Preface, which has for its title, "PREFACE *to the* FIRST DISSERTATION, *containing some critical remarks on the Discourse prefixed to the French Encyclopedie.*"

"When I ventured," says Mr Stewart, "to undertake the task of contributing a Preliminary Dissertation to these supplemental volumes of the *Encyclopædia Britannica*, my original intention was, after the example of D'Alembert, to have begun with a general survey of the various departments of human knowledge. The outline of such a survey, sketched by the comprehensive genius of Bacon, together with the corrections and improvements suggested by his illustrious disciple, would, I thought, have rendered it comparatively easy to adapt their intellectual map to the present advanced state of the sciences; while the unrivalled authority which their united work has long maintained in the republic of letters, would, I flattered myself, have softened those criticisms which might be expected to be incurred by any similar attempt of a more modern hand. On a closer examination, however, of their labours, I found myself under the necessity of abandoning this design. Doubts immediately occurred to me with respect to their logical views, and soon terminated in a conviction, that these views are radically and essentially erroneous. Instead, therefore, of endeavouring to give additional currency to speculations which I conceived to be fundamentally un-

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sound, I resolved to avail myself of the present opportunity to point out their most important defects;—defects which I am nevertheless very ready to acknowledge, it is much more easy to remark than to supply. The critical strictures, which in the course of this discussion I shall have occasion to offer on my predecessors, will, at the same time, account for my forbearing to substitute a new map of my own, instead of that to which the names of Bacon and D'Alembert have lent so great and so well-merited a celebrity; and may perhaps suggest a doubt, whether the period be yet arrived for hazarding again, with any reasonable prospect of success, a repetition of their bold experiment. For the length to which these strictures are likely to extend, the only apology I have to offer is, the peculiar importance of the questions to which they relate, and the high authority of the writers whose opinions I presume to controvert."

In the above-mentioned No. V. [IV.] the experiment thus spoken of will be seen hazarded: and, to help to show the demand for it, a critique on the *Map*, for which *Bacon* found materials and *D'Alembert* the graphical form, precedes it: a critique, penned by one, in whose eyes the most passionate admiration, conceived in early youth, afforded not a reason for suppressing any of the observations of an opposite tendency, which, on a close examination, have presented themselves to maturer age.

By an odd coincidence, each without the knowledge of the other, the Emeritus Professor and the author of these pages will be seen occupied in exactly the same task. The one quitted it, the other persevered in it: whether both, or one alone—and which, did right, the reader will have to judge. For an experiment, from which no suffering can ensue, unless it be to the *anima vilis*, by which it is made, no apology can be necessary. Having neither time nor eyes, for the reading of anything but what is of practical necessity, the above passage contains everything which the author will have read, in the book from which it is quoted, before the number in question is received from the press. To some readers—not to speak of instruction—it may perhaps be matter of amusement, to see in what coincident and in what different points of view, a field so vast in its extent has been presenting itself to two mutually distant pair of eyes,—and in what different manners it has accordingly been laboured in by two mutually distant pair of hands. To the author of these pages, in the present state of things, from any such comparison, time for the instruction being past, nothing better than embarrassment could have been the practical result: for the departed philosophers had already called forth from his pen a load already but too heavy for many a reader's patience.

On casting upon the ensuing pages a concluding glance, the eye of the author cannot but sympathize with that of the reader, in being struck with the singularity of a work, which, from the *running titles* to the pages, appears to consist of nothing but *Notes*. Had the whole together—text and notes—been printed in the ordinarily *folded* or *book* form, this singularity would have been avoided. But in the view taken of the matter by the author, it being impossible to form any tolerably adequate judgment on, or even conception of, the whole, without the means of carrying the eye, with unlimited velocity, over every part of the field,—and thus at pleasure ringing the changes upon the different orders, in which the several parts were capable of being surveyed and confronted,—hence the presenting them all together upon one and the same plane —or, in one word, *Table-wise*—became in his view a matter of necessity. But the matter of the text being thus treated *Table-wise*, to print it over again in the ordinary form would, it seemed, have been making an unnecessary addition to the bulk of the work. Hence it is that, while the *Notes* alone are printed *book-wise*, the *Text*, to which these *Notes* make reference, and without which there can be little expectation of its being intelligible, must be looked for in the *two first* of the Tables which will accompany this work—and which, out of a larger number, are the only ones that will accompany this first part of it.

Hence it happens, that, on pain of not extracting any ideas from the characters over which he casts his eye, the reader will find the trouble of spreading open the Tables, as he would so many maps, a necessary one. Even this trouble, slightly as it may be felt under the stimulus of any strongly exciting interest, will—as is but too well known to the Author, from observation, not to speak of experience—be but too apt to have the effect of an instrument of exclusion, on those minds, of which there are so many, of which the views extend not beyond the amusement of the moment. But, as above, whatsoever may be the risk attached to the singularity thus hazarded, it has presented itself as an unavoidable one.

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CHRESTOMATHIA.

NOTES TO CHRESTOMATHIC TABLES.

TABLE I.

(a.) [*Chrestomathic.*] A WORD, formed from two Greek words, signifying *conducive to useful learning.* After it was framed, it was found employed in a book of the seventeenth century,* and would probably be to be found in other books.

(b.) [*Stages.*] In regard to the several *stages*, into which the proposed course is proposed to be divided, all that, in the present state of the undertaking, can be done, is—to give intimation of the *choice*, which, among the several possible subjects of instruction, has been made, and of the *order* in which it is proposed they shall succeed to one another. At this juncture, any such attempt as that of fixing the *quantity of time*, absolute and comparative, respectively to be allotted to them, would evidently be premature.

ADVANTAGES DERIVABLE FROM LEARNING OR INTELLECTUAL INSTRUCTION: viz.

I. *From learning, as such, in whatsoever particular* SHAPE *obtained.*

Advantage the First: Securing to the possessor a proportionable share of general respect. See Table I.

Advantage Second: Security against ennui, viz., the condition of him who, for want of something in prospect that would afford him pleasure, knows not what to do with himself: a malady to which, in retirement, men of business are particularly exposed.

(1.) For this sort of uneasy sensation, to which everywhere the human mind is exposed, the English language, in general, so much more copious than the French, affords no single worded appellative. The word *ennui* expresses the species of uneasiness; *désœuvrement*, another word for which the English language furnishes no equivalent, expresses the cause of the uneasiness. Ennui is the state of uneasiness, felt by him whose mind unoccupied, but without reproach, is on the look out for pleasure; pleasure in some one or more of all shapes; and beholds at the time no source which promises to afford it: désœuvrement is the state in which the mind, seeing before it nothing to be done, nothing in the shape of business or amusement which promises either security against pain or possession of pleasure, is left a prey to the sort of uneasiness just designated.

In the extent and variety of the ideas obtainable by instruction, are found security for that profit-yielding employment, commonly designated by the words livelihood and business; for the necessary security against the accidents of all sorts by which well-being may be impaired and being destroyed. For the designation of the means of securing being and well-being, the words—calling, vocation, and occupation, were commonly employed by our forefathers, meaning always, on these occasions, profit-yielding occupation, as the words—business, the means of livelihood, are employed by us their successors. The word avocation, a most incompetent and equivocal term, has of late years been vulgarly, and we may almost say commonly, obtruded upon the words calling, vocation, employment. A vocation is a *calling;* an avocation is a *calling off.* Engaged in an avocation, a man is engaged in that, whereby being called off from everything, he is not left free to apply himself to anything.

In this same case, in which so efficient a security is afforded against pain in all its shapes, as well as against the extinction of all pleasures, may be seen an equally efficient and much more extensively necessary security against the pain of mental vacuity or ennui.

It is true, to a mind engaged in the toil of business, a state of repose is in the intervals of business a state of pleasure. For a time, yes; but, especially when the nature of the business includes not in it anything peculiarly toilsome, that time must be short, otherwise the pain of ennui soon succeeds to the pleasure of repose.

During the life of him who continues in business to the end of it, this pain seldom exceeds the measure of a slight uneasiness. But when remembering the anxieties, as well as toils, under which he had been labouring in the course of his business, the man of business seeks, in the absence of this source of toil and anxiety, a source of perpetual pleasure, he finds too often that the mere pleasure of repose is but a short-lived pleasure, and that its place is soon occupied by a pain of ennui which ends but with life.

To this pain of ennui, to which the man of industry is exposed only towards the end of

* An allusion, probably, to the Chrestomathia of Helladius, published with notes by Meursius in 1686.—*Ed.*

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tomy. (73.)
nology. (74.)
ology. (75.)
tetics. (76.)
eria Medica. (77.)
phylactics. (78.)
rapeutics (79.) at large.
gery, *i. e.* Mechanical Thera-
eutics. (80.)
ygiantics, *i. e.* Physiology,
c. applied to the inferior
nimals. (81.)
s, the art of destruction, ap-
nimals. (82.)
continued.
ontinued.
tinued.
continued.
e Drawing continued.
al Exercises continued.

STAGE V.

etry (84.) (with demonstra-
s.)
metic (85.) (the higher
nches.)
ra. (86.)
al Geography. (87.)
al Chronology. (88.)
ntinued.
continued.
e Drawing continued.
al Exercises continued.
y, or Arts and Manufactures

ing at large; *i. e.* the art of
ecordation. (90.)
l Book-keeping. (91.)
g (92.) applied to *Recapitu-*
n such of the above branches
uire it.

CHEMISTRY.

9. 1. Gunnery. I. II. IV.
10. 2. Fortification. I. IV.
11. 3. Navigation. I. IV.
12. 4. Art of War. I. III. IV. (99.)

IV. BELLES LETTRES.

13. 1. Literary Composition at large. (III.)
14. 2. Poetical Composition. III.
15. 3. Rhetorical Composition. III.
16. 4. Criticism. III.

V. MORAL ARTS and SCIENCES.

17. 1. Divinity. II. III.
18. 2. Private Ethics or Morals (controverted points.) II. III. (100.)
19. 3. Law (National.) III.
20. 4. International Law. III. IV.
21. 5. Art and Science of Legislation in general. III. IV.
22. 6. Political Economy. III. IV.

VI. ALL-DIRECTING ART and SCIENCE.

23. Logic (by some called *Metaphysics.*) III.

N. B.—In regard to several of the branches in this list, the proposition by which the omission is prescribed, as likewise the *Ground* on which it is prescribed, may, in some way or other, be found susceptible of modification. But whatever may, in this or that instance, be thought of the *filling up*, the scheme of the outline may, it is hoped, be found to have its use.

☞ It is supposed that few, if any, existing branches of Art or Science can be found, which are not included in one or other of the Denominations inserted in this Table. In so far as this is the case, it may, in some measure, serve the purpose of an *Encyclopædical sketch.*

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his career, the man of hereditary opulence stands exposed throughout the whole course of it. It is the endemical disease that hovers over the couch of him whose mind, though encompassed with the elements of felicity in the richest profusion, allows them, by neglecting them, to play a comparatively passive part. From uneasiness of this sort, the mind of him who has cultivated no more than a single branch of art or science, possesses a rarely insufficient policy of insurance. How much more complete the security of him who possesses in his own mind a richly stocked and variegated garden of art and science!

Of the value of this kind of advantage, a more striking and instructive example is scarcely to be found than that which is afforded by the case of Mr Beardmore, as reported in the Obituary of the "Gentleman's Magazine" for February 1814. "Died, Feb. 13, of a gradual decline, after having passed his grand climacteric with less visitation from indisposition of mind or body than happens to mankind in general, at his house in Owen's Row, Islington; calm from philosophical considerations, and resigned upon truly Christian principles; beloved, esteemed, and regretted by all who knew his worth, John Beardmore, Esq., formerly of the great porter-brewing firm of Calvert and Co., in Redcross Street, London. A stronger evidence of the fallaciousness of human joys, and of the advantages resulting from honest employment, can scarcely be pointed out than the life, the illness, and the death of this good man exhibited. Mr Beardmore was born in dependent circumstances, and of humble parentage, in the country. His constitution, naturally sound, was hardened by exercise; his frame of body, naturally athletic, was braced by temperance; his mind, naturally capacious, owed little to regular education. The theatre of life was his school and university, and in it he passed through all his degrees with increasing honours. For many years after his residence in London, Mr Beardmore acted as a clerk in the brewery in which he finally became a distinguished partner. When it was deemed proper to transfer the concern from Redcross Street, and to consolidate it with that in Campion Lane, Upper Thames Street, Mr Beardmore withdrew himself entirely from business, and retired to one of the houses which his brother William had left him at Islington, by will at his decease, some years before. From inclination active, and from habit indefatigably industrious, he had hitherto commanded such an exuberant flow of good spirits as made him the object of general remark among friends, whom his kindness and vivacity delighted. Early rising contributed much to the support of this happy and equable temperament. He preserved a memory richly stored with pleasant anecdotes, sprightly remarks, and useful information on a great variety of topics, derived not from books, but from living studies. He had acquired also a lively, popular facility of singing easy songs, to which a tuneful voice gave tolerable execution. For dull sedentary investigations of abstract science; for plodding mechanical, uninterrupted pursuits of didactic instruction, classical learning, or moral and theological knowledge, the gay, the heartsome John Beardmore, felt no wish, and avowed no relish. He was, as he often proudly declared, a 'true-born Englishman.' Humane by natural feelings, and charitable by a sense of religious duty, he passed through a life of honourable toil in business with an easy mind, with a light heart, and with an unsullied reputation. From the fatal hour in which he quitted business, however, he grew insensibly more and more the victim of listlessness and ennui. With high animal spirits; with a mind still active, and a body still robust; with confirmed health, independent property, an amiable wife, a plentiful table, and a social neighbourhood, Mr Beardmore was no longer 'at home' in his own house. The mainspring of action was now stopped. In all his pleasures, in all his engagements, for the day, for the week, or for the month, he was conscious of a vacuum, that, alas! his want of intellectual resources rendered him utterly unable to supply; he experienced now, perhaps for the first time, that intolerable *tædium vitæ*, which, like hope deferred, 'maketh the heart sick.' The result is soon told. Long did he bear up against the clouds that obscured his little horizon of domestic repose; at times, indeed, transient flashes of cheerfulness still gleamed athwart the gathering gloom; but the intervals between these bright seasons grew longer, and even their short duration lessened. Want of customary application brought on relaxation of activity; want of exercise brought on langour of body and depression of spirits; a train of evils ensued, comprising loss of appetite, nervous affections, debility mental and corporeal, despondency, sleeplessness, decay of nature, difficulty of respiration, weariness, pain and death."

Advantage Third: Security against inordinate sensuality, and its mischievous consequences.

(2.) Against the pleasures of sense, over and above such objections as are in some cases drawn from the topic of religion, there are these grand heads of objection, that in the pursuit they are apt to lead into courses injurious to others, and, by the obstruction they occasion to necessary business, as well as by the loss of reputation, to a man's self, and that, through satiety, the consequence of full indulgence in them, they are apt to end in ennui—a pain for which they have left no cure. Not in any degree to diminish, but to increase to the utmost, the sum of innoxious enjoyment, is the object of this system. But, to secure that increase, it is necessary to render men duly sensible of the value, and to engage them in the steady pursuit of those perennial springs

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of enjoyment which are the more productive the more copiously they are drawn upon, in preference to those which, in proportion as they are drawn upon to excess, yield in the shape of ennui, at the least, if not in still more afflicting shapes, pain and grief instead of the expected pleasure.

When it is by the apprehension of future evil that men are turned aside from the pursuit of present pleasure, the sacrifice, however prudent and even necessary, is still not the less a painful one. But, when it is by the expectation of still greater pleasure, whether near or more or less remote, that the diversion is occasioned, pain is not produced in any shape; the profit made is made without sacrifice, and the transition is only from a less to a greater pleasure. But, the greater the variety of the shapes in which pleasures of an intellectual nature are made to present themselves to view, and consequently the greater the degree of success and perfection with which the mind is prepared for the reception of intellectual pleasures, the greater the chance afforded of security from the pains by which sensual pleasures are encompassed, and the more advantageous the terms on which the purchase of that security is effected.

Advantage Fourth: Security against idleness and consequent mischievousness.

(3.) The connexion between mental vacuity and mischievousness is not as obvious as that between mental vacuity and sensuality; but it is not less natural and indisputable.

The notion which ascribes to inanimate nature the abhorrence of a vacuum, has been long spoken of as an ungrounded and whimsical conceit; had the notion been confined to human nature, it would not have been equally open to dispute.

A mind completely vacant, if any such there be, is a mind in which there exists neither pleasure nor pain, nor any expectation of either. But, scarcely has such a state of mind time to take place, when it is succeeded by ennui. Ennui, it has been shown, is a state of pain; and from pain in this shape, as from pain in every other shape, man seeks deliverance. That deliverance is attempted no otherwise than by the attempt to fill the vacuity with pleasures. The pleasures thereupon sought, consist in the gratification afforded to one or other of these appetites, namely, the self-regarding, the social, or the dissocial. To the self-regarding belong, as has been shown, sensuality. From gratification afforded to the social affection, not evil but good would be the result; but unfortunately, this result, in whatsoever degree beneficial, is of all of these the least natural. There remains only the dissocial class of affections. In human beings in general, and in human beings during the age of childhood in particular, what is called mischief, springs commonly either from curiosity, or love of sport; and in particular, that sort of sport, that pleasure of the imagination, of which in virtue of its novelty, whatever appears new, and affords in any shape, how indeterminate soever, the prospect of pleasure, is the natural source.

From this source it is, that mischief in the case of children, is most apt to spring. The other source is the dissocial affection, ill will or malevolence. Where love of sport is the source of action, the suffering which happens to be produced, is rather an accidental effect than a result aimed at; if it be among the results aimed at, the source of the action is not so much love of sport as malevolence.

What renders the love of sport dangerous, when not tempered or directed by that prudence or benevolence which is necessary to restrain it from seeking its gratification in actions productive of suffering, is that the love of sport exists at all times, and waits not for accident to call it forth; whereas, malevolence scarcely ever has place, unless excited by some particular incident having the effect of a provocation. A disposition to seek in the destruction of a house by fire, a gratification for revenge, is highly dangerous; but a disposition to seek in that same source, a gratification for the mere love of sport, unmixed with any portion of revenge or anger, is still more dangerous. From the former, no person has any thing to fear, excepting the comparatively small number of persons who have happened, by means of some special cause of displeasure, to have excited in the mind of the individual in question, the appetite of ill will; whereas, from the incendiary, who has been rendered such by the mere love of sport, every person has equally cause for fear who has property that stands equally exposed to destruction from fire.

If in any respect a disposition to sportive mischief is less formidable than a disposition to malicious mischief, it is because, in the first place, in the love of sport the passion is not near as strong as in the other case; and, secondly, because it is equally capable of finding gratification in results that are unattended with mischief; while the strength of malevolence is boundless, and nothing but the production of suffering can afford it gratification.

Thus it is, that weeds of all sorts, even the most poisonous, are the natural produce of the vacant mind. For the exclusion of these weeds, no species of husbandry is so effectual, as the filling the soil with flowers, such as the particular nature of the soil is best adapted to produce. What those flowers are can only be known from experiment; and the greater the variety that can be introduced, the greater the chance that the experiment will be attended with success.

Advantage Fifth: Security for admission into, and agreeable intercourse with, good company, *i. e.*, company in or from which, present and harmless pleasure, or future profit or security, or both, may be obtained.

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II. *Advantages derivable from Learning in this or that particular shape, and more especially from the proposed Course of* INTELLECTUAL INSTRUCTION.

It may be of use to bring together, under one view, the advantageous results of which the proposed scheme of instruction seems to afford a promise; after that, an examination will be made of such objections as seem most likely to be opposed to it; answers will be subjoined, which will show that these objections are either inapplicable or inconclusive; and in addition, some circumstances will be stated serving to fortify the confidence with which the managers look forward to the accomplishment of the proposed objects, as well in regard to the efficiency of instruction as to the rate of progress.

Advantage First: Multitude and extent of the branches of useful skill and knowledge, the possession of which is promised by this system, and at an early age.

(4.) As to the multitude of the branches of useful instruction promised by this system, and the extent which they cover in the field of knowledge, these are points not exposed to doubt. Of this extent, the conception formed will be more and more correct and complete, the more closely the subject is examined. Whether with reference to the field of knowledge considered by itself, or with reference to whatsoever has hitherto been either executed or attempted at the most approved establishments, even in those in which the time allotted to instruction has no assigned limits, it will not be easy to find an example in which the quantity of useful knowledge, here proposed to be administered, has been equalled. Still less when consideration is had of the age, namely, fourteen years and no more, at which this mass of instruction is proposed to have been administered, and expected to have been administered with good fruit.

In relation to these points, whatsoever opposition the system may be destined to experience, will assuredly be built on very different grounds. The promise (it will be said) is too great to be accomplished; or supposing it accomplished, more evil will be produced in other shapes, than good in the shape of knowledge. Under the head of objections obviated, an answer will be given to both these surmises.

Advantage Second: Increased chance of lighting upon pursuits and employments most suitable to the powers and inclinations of the youthful mind in every individual case.

(5.) "Ah, what talents! Ah, what capabilities! Had but the opportunities and assistances necessary to the development of them, and turning them to account, fallen in his way." Under the existing system, lamentations to this effect are perhaps not much less reasonable and well grounded than they are frequent. To obviate this cause of regret, nothing is more manifest than that this system will be contributory, by the whole amount of the difference in point of variety and extent of instruction, which the lot of the pupil will exhibit, compared with what would have been his lot, had his qualities been improved by no better culture than such as an ordinary school, conducted under the existing system, can afford, or, what is but too common, been suffered to remain in a state of utter neglect up to the age of about fourteen—the age at which apprenticeship usually commences, and at which the course of instruction here proposed will have been gone through.

Advantage Third: General strength of mind derivable from that multitude and extent of the branches of knowledge included in this course of instruction.

(6.) If the objects presented in this course of instruction to the youthful mind, had no connexion with each other, no such beneficial result as that which is here announced could be expected. But amongst those objects, natural principles of order have place, and to apply those principles to the best advantage, will be the constant aim of the whole system from the beginning to the end. Every part having a natural connexion with every other, and every favourable occasion being embraced for bringing that connexion into view, every object will, by virtue of the principle of association, as often as it is presented, contribute more or less to fix every other in the memory, and thus to render the conception entertained of it so much the clearer. At the first stage, sensation and memory being the only faculties called directly into exercise, the conception may be expected to be proportionally faint and indistinct. But at each succeeding stage, not only will sensation and memory be applied to the subject matter, but the judgment will be applied to the observation of the points of agreement and diversity. In the first stage, the object will be exhibited in an isolated and quiescent state. At the succeeding stages, the same objects will be exhibited as parts of a moving scene, acting one upon another.

Advantage Fourth: Communication of mental strength considered in its application to the business chosen by each pupil, whatever that business may be.

(7.) Strengthened to so many comparatively arduous purposes, the mind of the pupil cannot be otherwise than strengthened to the purpose of the comparatively easy occupation, be it what it may, to which it is to apply itself with a view to obtain a livelihood. Between two minds equal by nature, the strength at each period of their growth, will be in proportion to the variety and extent of the ideas with which they have been impressed; and in this circumstance, may be seen the only cause of whatsoever difference there is between the mind of a well educated youth under the existing systems of education, and the mind of the Esquimaux, or the New Zealand savage at the same age.

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From the immaturity and weakness exhibited by the minds of most children, under the present mode of culture, it would be wholly unjust to infer, that the imperfections would be similar under a system of culture, raised to that degree of improvement of which the human mind is capable. At present, the term of childhood is protracted, and the growth of the mind is retarded to an inordinate degree, by the state of inanimation in which it is kept. To the body, exercise of some sort, however childish, is necessary; not merely with a view to present comfort and that sort of general felicity which is termed good spirits, but with a view to future health and vigour. On the contrary, to the mind, even from the earliest period at which ideas begin to be received from surrounding objects, it is neither necessary nor useful in any way, that either the conversation, or the objects which that conversation takes for its subjects, should be of the cast commonly called childish; because, under the present system, children can have access to nothing better. When due attention is paid to adapting to the state of the youthful mind the objects which, for the sake of instruction, are presented to it, the difference between play and study is but nominal. Every task may be converted into play, if the taskmaster be but properly acquainted with his business.

That the minds of children, down to so late a period, continue in the sort of childish state, which at present is so general, is but the natural and necessary consequence of the sort of occupation, or no occupation, which they are left to find out for themselves, or to which they are put, and of the conversation with which they are surrounded: occupation put into their hands with no higher view than that of keeping them for the moment from being mischievous or troublesome: conversation composed of the prattling of ignorant persons of both sexes in the condition of servants. In the existing state of things, this utter absence of improving intercourse, coupled frequently with the abundance of corruptive intercourse; this hapless condition, though in every instance a misfortune, is scarcely in any instance a fault. The time of both parents is engrossed by the necessary business of the family, added to that of the shop, the counting-house, or the profession. The children, meantime, are left almost entirely to themselves, and to one another, under the casual inspection of a female servant.

By the proposed plan of instruction, the young mind will, for the greater part of the day, be rescued out of such hands.

Children, in whose minds, and thence in whose conversation, from the earliest dawn of reason, nothing of what is commonly understood as childish has had place, and on whose countenances all the time scarcely a cloud has been visible; children not less replete with vigour and felicity than with useful knowledge have fallen under the observation of several of the proposed managers.

Advantage Fifth: Giving to the youthful mind habits of order applicable to the most familiar, as well as to the highest, purposes: good order, the great source of internal tranquillity and instrument of good management. (See Stage V.)

(8.) In as far as the names of species, the names of the genera in which they are comprised, and of the orders and classes (or by whatsoever sets of names rising one above another in the scale of comprehensiveness the several groups of objects have been designated) are brought under review, in conjunction with natural history, a lesson in one of the most useful branches of logic, viz., the art of classification will have been administered—administered insensibly and without parade, but not the less effectually—and this without any additional time or trouble on the part of either teacher or learner.

In this way, and by this means, a foundation will be laid, and even at this early age, the mind insensibly prepared for the reception of a science destined for a superior stage, as being of the number of those for the attainment of which the exercise of a faculty of a higher order, the judgment, is necessary, viz., chemistry—a science in which more use is made of arrangement, and in which more importance is attached to that operation, than in any other.

When once formed, the habit of and the disposition to order, to whatsoever subjects it may have been first applied, is so easily and readily transferred to any and to every other, that it ought not to be matter of surprise, should the assertion be advanced, that by the habit thus implanted at the very opening of life, a man will find himself so much the better during the whole course down to the very close of it; and that, by what is thus gained at the day-school, the state of the house and family, whatever it may come to be, and the state of the shop, the counting-house, and the profession, whatever they may come to be, will, to a greater or less degree, be sure of being rendered better than they would otherwise have been.

Advantage Sixth: Possession of sources of comfort in various shapes, and security against discomfort in various shapes. (See, in particular, Stages III. and IV.) Table I. (5.)

Advantage Seventh: Security of life, as well as health—that blessing, without which no such thing as comfort can have place. (See Stage IV.) Table I. (6.)

Advantage Eighth: Security afforded against groundless terrors, mischievous impostures, and self-delusions.

(9.) Numberless are the mischievous delusions to which a man is exposed by ignorance, against which knowledge presents the only preservative.

Of these delusions some operate to the pre-

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judice of the person himself, others to the prejudice of persons in general, to an extent to which there are no limits but those by which this power of doing mischief is circumscribed.

Examples.—*Delusion* 1. *Hopes* of profit, in a mechanical establishment, from discovery of a practically applicable *perpetual motion*: *Preservative*—Acquaintance with the principles of *mechanics*. (See Stage II.)—*Delusion* 2. *Hopes* of profit, from discovery of what has been called the *philosopher's stone*: and thereby that of the art of converting less rare and costly metals into gold: *Preservative*—Acquaintance with the mineralogical branch of chemistry: (See Stage II.)—*Delusion* 3. *Hopes* of extravagant profit, from *manures*, the composition of which is kept secret: *Preservative*—Acquaintance with the *theory of vegetation*. (See Stage III.)—*Delusion* 4. *Hopes* of profit to health, by the use of *medicaments*, or modes of *medical treatment*, to which no such virtue as is believed or pretended to be believed, is attached: as in the case of *animal magnetism*, *tractorism*, &c. &c., and of medicaments in vast variety, prepared without sufficient acquaintance with, or attention to, the branches of art and science subservient to *Hygiantics*: *Preservative*—Acquaintance with those several branches of art and science. (See Stage IV.)—*Delusion* 5. *Hopes* and *fears*, derived from a supposed connexion, between the distant celestial bodies on the one part, and the well or ill being, of particular individuals among mankind, on the other part: *Preservative*—Acquaintance with *Uranology*, more frequently termed *Astronomy*. (See Stage V.)—6. *Fears*, derived from the opinion of the existence—and occasional operation or appearance—of *Ghosts*, *Vampires*, *Visible Devils*, *Witches*, and unembodied beings, of various sorts, actuated by the desire, and endued with the power, of doing mischief to mankind: *Preservative*—On the one hand, acquaintance with *Natural Philosophy* in general (see Stages II. III. IV. V.,) *i. e.* with the means by which, and the manner in which, effects beneficial and pernicious to mankind are really produced: on the other hand, in the nature of *human testimony*, in the imperfections of which, delusive notions sometimes find their *channel*, and sometimes have had their *source*: in that propensity to be deceived, which is in the inverse ratio of the progress of true knowledge, and in that propensity to deceive others, which is in the inverse ratio of the progress of true morality: of these propensities, it is by *History* and *Biography* that the exemplifications, and thence the proofs, are furnished. In so far as it is from *Natural Philosophy*, that the preservative is derived, it belongs beyond doubt to the *Chrestomathic* course: in so far as it is from the principles of *Evidence*, and thence from *History* and *Biography*, the investigation and application of the remedy will, probably, according to general opinion, be regarded as belonging to a maturer and self-instructing time of life. For, on this head, the correctness, of whatsoever notions may come to be entertained, will depend—not, as in the case of *Natural Philosophy*, in a principal measure on the *senses* and the *memory*, but in a much greater degree upon the *judgment* or *judicial faculty*; and *that*, too, acting in each instance under the necessity of including, in the grounds of its decisions, collections of particulars, ample in extent multitude and variety, taken conjunctly into consideration, after having been brought all together into comparison for the purpose.

In knowledge in general, and in knowledge belonging to the physical department in particular, will the vast mass of mischief, of which perverted religion is the source, find its preventive remedy. It is from physical science alone that a man is capable of deriving that mental strength and that well-grounded confidence which renders him proof against so many groundless terrors flowing from that prolific source, which, by enabling him to see how prone to error the mind is on this ground, and thence how free such error is from all moral blame, disposes him to that forbearance towards supposed error, which men are so ready to preach and so reluctant to practise.

Advantage Ninth: Securing an unexampled choice of well-informed companions through life.

(10.) Among unfurnished minds, from the excitements it affords to sensuality, idleness, and mischievousness, company, in proportion to its abundance, is the great source of danger: hence, in the like proportion, will be the great source of security. The greater the multitude and variety of the sources of entertainment opened to his view, the greater is a person's chance of finding those which are suited to his taste; the greater the multitude of associates occupied along with him in seeking entertainment from each source, the stronger his assurance of meeting with that social co-operation from which labour receives so much relief, and pleasure so much increase.

At the end of a term of six or seven years, passed in company with so many hundred fellow-labourers and coadjutors, in occupations for which this scheme of instruction alone provides, nothing but that persevering course of bad behaviour, against which it affords a matchless security, can ever leave him at a loss for company, the agreeableness of which has been so amply provided for by the magnitude of the number open to his choice.

Advantage Tenth: Affording to parents a more than ordinary relief from the labour, anxiety, and expense of time necessary to personal inspection.

(11.) To the class of persons whose callings present an urgent demand for every moment of their time, during the hours of business, a temporary neglect of their children, if kept at home, is a misfortune, in a great degree,

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unavoidable. In this state of things an expedient, not unfrequently resorted to, is that of sending the children to some day-school, however incompetent to the purpose of instruction, more for the assurance of keeping them under inspection, and thence out of harm, than for the hope of enabling them to make any considerable acquisition of useful knowledge. To all persons thus circumstanced, the particular value of an institution in which so much positive good is superadded to this sort of negative accommodation, is too obvious to need any further mention.

Advantage Eleventh: Unexampled cheapness of the instruction in proportion to its value.

(12.) That in proportion to the quantity and value of the instruction thus proposed to be administered, the cheapness is altogether without example, is a position, the truth of which will not admit of a moment's doubt. The price, say £6 per year for seven years, in all £42, for instruction in the list of branches proposed to be administered!

The cheapness of the price depends upon and is proportionate to, the quantity and variety of instruction administered in the given length of time. In this, if there be any thing to the proof of which words can be necessary, or so much as conducive, it is not to the fact or the degree of cheapness, supposing the service rendered, but to the possibility of its being rendered, and rendered in so short a space of time. Of the assumed possibility and probability, the expected causes are, therefore, the only objects which, on this occasion, can require to be brought to view.

These causes may be summed up under the following heads: 1. The use made of the Lancasterian method. 2. The largeness of the scale. 3. The care taken to adapt the species of instruction to the state of the pupil's faculties in respect of maturity.

1. As to the Lancasterian method, the efficiency of it is already matter of experience; experience so well established, that it was the very certainty and invariableness of success, to the extent to which it has hitherto been applied, that suggested the extended application of it here proposed.

2. As to the proposed magnitude of the scale, this advantage, though in its nature distinct from the peculiar method of teaching in question, is however among the fruits of it. That method may be used upon the smallest scale with the advantage peculiar to it; but it is only by the combination of expedients included in this method, that so unexampled a magnitude could be given to the scale, that instruction could be administered to so prodigious a multitude of scholars by the same person at the same time.

It is by means of the peculiar method of teaching that the number of scholars capable of receiving instruction from the same person, at the same time, is made to receive such great increase. It is from the magnitude of the number of the persons receiving instruction, under the same system of superintendence, that the sum required of each is capable of being to such a degree reduced. Being taught at one and the same time, by one and the same person, at one and the same place, various sources of expense which, on the existing plans are necessarily multiplied, are by this plan reduced to one:—one building, one general superintendent, constantly on the spot; one apparatus for warming, the same for lighting; one set of implements employed as instruments of instruction.

Moreover, many helps to instruction are easy to be procured; many helps unattainable otherwise than by that ample contribution, the burthen of which is rendered light by the multitude of contributors.

Advantage Twelfth: Least generally useful branches last administered, and thence, in case of necessity, omissible with least loss.

(13.) Of this arrangement the great practical use is, that when either the quantity of money, or of time to be spared for the purpose of instruction, is limited, instruction to the greatest amount, in regard to value, may be administered and received for a given quantity of money and of time; or, what amounts to the same thing, instruction of the greatest value is given at the least expense of money and time.

The coincidence which it is supposed will be seen to have place, and which, if it does, will be acknowledged to be a fortunate one, is, that for the most part those branches which are the most useful will be found the easiest and the pleasantest. Thus—

1. In the last stage of all comes mathematical science by itself. Of this branch considered apart and contradistinguished from mechanics, the usefulness will be found less extensive in respect to the number of persons to whom it can be of any use, and to the common purposes of life, than any other of the branches of instruction comprehended in this course. It is accordingly referred to the last stage; and hence those parents, in whose estimation the value of the instruction thus obtainable, will not afford a sufficient compensation for the time and money that can be spared for it, may stop at this point of the course.

2. In the last stage but one comes Medical Science by itself: multitude taking place of unity no otherwise than by the division of the one great whole into its component parts.

In speaking of this branch of knowledge as of less utility than any of those which it is proposed should precede it, the opinion thus expressed is rather the opinion regarded as likely to be the prevalent one, than an opinion with which the authors of the plan are themselves impressed. To the claim it makes to precedence in competition with mathematical science, they can give their support with much

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less diffidence. Unless in the case of a person who, by profession, or in the gratification of a predominant taste, is devoted to the mathematics, they can affirm, without hesitation, not only that health and strength themselves are, in relation to being and well-being, of more value than abstract ideas of circles, triangles, squares, or even the highest exemplified or imaginable orders of curves, but even that the difference in respect of security that may reasonably be expected for those blessings, by means of the proffered instruction, in comparison with the degree of security of which a man, not designed for the medical profession, would otherwise be in possession, would, with a degree of persuasion proportioned to the intensity of the attention bestowed upon the comparison, be found to be possessed of the alleged superiority in point of substantial value.

This persuasion would still have place, even though the portion of time allotted to instruction in this branch of useful knowledge were accelerated; and in such sort accelerated that it should be administered antecedently to those portions of Natural History and Natural Philosophy which respectively contribute to form its basis. But, forasmuch as these introductory branches are included in the present plan, were that of medicine, stript of these supports, taught at an earlier stage, some of those other branches themselves, so constantly and indispensably useful, might to some individuals be lost. Hence, upon the whole it was thought best to postpone this branch of instruction to that stage at which it could be administered to most advantage.

3. In the third stage, and not before the above-mentioned two, come Architecture and Husbandry. Of these two branches of instruction, the utility is too obvious to be in danger of finding contradiction from any person. To the purpose of direct application to practice, the utility of them, in comparison with that of the branches which immediately precede them, is in point of extent, as measured by the relative number of persons likely to derive from them any material information, limited and narrow. Here, then, may be seen a stage at which a portion of the whole number of scholars might in case of pressure, either in respect of time or money, make a stand.

4. There remain for consideration the two first stages; and here it cannot but be confessed, and even professed, that the advantage stops. Unless it were for innoxious amusement, invigoration, and mental enlargement, without the second stage of instruction, whatsoever is contained in the first would, comparatively speaking at least, not to say absolutely, be of little value. It is chiefly for the sake of the second, and to serve for introduction to the second, and this at a time when the juvenile mind would not be ripe enough for the reception of the second, that the first stage is received into the course.

With regard to what is here said on the subject of eventual premature departure, the persuasion entertained by the authors of this plan, would be very much misconceived, if the supposition were, that in their opinion any thing less than irresistible necessity could serve as a sufficient warrant for any such relinquishment. By thus quitting the course at the commencement of a posterior stage, the loss which the scholar would sustain would be not only the whole of the instruction comprehended in that stage, but a portion more or less considerable of the mass of instruction comprehended in the several preceding stages. For, that nothing which has once been gained be lost, one of the fundamental maxims of this institution is, that whatsoever thread of instruction has once been begun upon, should be carried on to the very end. In a great measure, this, the chain whereby in the proposed course, the several branches of instruction are linked together, will suffice for the purpose of this unremitting continuance; and when this natural means fails, care is intended to be taken for supplying the deficiency by repetitions and re-exhibitions made for this express purpose.

Advantage Thirteenth: Need and practice of corporeal punishment superseded; thence masters preserved from the guilt and reproach of cruelty and injustice.

(14.) In regard to this advantage, the assurance of success stands on firmer ground than in the instance of any of the preceding advantages,—that of direct experience, as exhibited in the improved system of education under both its modifications, viz., in the one pursued by the Rev. Dr Bell, and in that pursued by Mr Lancaster. It belongs not, therefore, to the additional story here proposed to be erected on that fabric, in contradistinction to the original building; but to the whole structure together, in contradistinction to the unimproved methods followed in schools in general.

In no school conducted upon either of those plans, is any use made of corporeally afflictive punishment in any form, and in particular in that of flogging. In the Lancasterian mode, it cannot be said, that, on the occasion of punishment, the person remains in every instance, altogether unafflicted. But, in whatsoever shape punishment is applied to any part of the body, no bodily pain is produced; of the suffering, such as it is, the seat is not in the body but in the mind.

Under the Lancasterian mode, the severest punishment ever known to be inflicted is, if it can with any propriety be termed a corporeal punishment, at any rate of this mild and innoxious nature; and in Dr Bell's, nothing, it should seem, that can in any way be termed corporeal punishment, has ever been in use.

On this occasion, a singular contrast presents itself to view. During their non-age, the children of the very lowest ranks in society, are in a way to be liberated, and in no incon-

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siderable number, have actually been liberated from a species of affliction and debasement to which the very highest remain subjected. Under the present plan, the exemption will, at any rate, be extended to the middle ranks; and the highest may have the benefit of it if they please. It is a question not unworthy the consideration of mothers, even in the highest rank, whether they will have their sons taught a smattering of Latin and Greek by tasks and flogging at Eton, Winchester, and the Royal School at Westminster, or in the way of pastime (without flogging) at the Chrestomathic School, within view of the august royal one.

In this aspect may be seen another advantage which, though to the proposed plan it belongs no otherwise than in its character of an extension given to the Bell and Lancaster plan, belongs to it not the less unquestionably, and that in contradistinction to the mode of instruction still pursued in the great and old established schools.

Under the system of flogging, coupled with the system of tasking, the flogging applied to the enforcement of the task-work, among the multitude of offences of which that system is constantly prolific, an incident which can never fail to happen now and then, under the most careful and irreproachable master, and is sure to happen every now and then under an ordinary master, is an act of punishment which, being by hastiness or wrong inference from the evidence really undue, is seen by the scholars to be so. As often as such an incident takes place, the imputation of injustice attaches itself to the character of the master, under whose order the punishment has been inflicted; and with a degree of strength proportionate to the severity of the infliction, the imputation of cruelty attaches itself to that of injustice.

Advantage Fourteenth: Affording to the first race of scholars a mark of particular distinction and recommendation.

(15.) What is common to all affords no distinction to any, and accordingly the more extensive the progress of this system of education, the less will be the advantage it is capable of affording in this particular shape. At the outset, however, and on the supposition that in other respects, the prospects held out by it are found to be realized, this advantage cannot but be a very substantial one. Every case in which, between a scholar of the Chrestomathic School, and a scholar of any ordinary school (not to mention a boy who has not been to any school,) a competition on any grounds has taken place, the advantage which will be possessed by the superiorly-instructed boy, is such, the estimation of which may be safely left to any one whose eyes have glanced over the preceding pages. This advantage, inseparably attached to the very nature of the case, may be considered as a premium, which in cases even of the most moderate degree of success the first comer will be sure to reap.

Advantage Fifteenth: Enlargement given to each scholar's field of occupation.

(16.) The more things he is more or less acquainted with, the more things he is fit for, and the better chance he has acquired of meeting with some *occupation*, (pecuniary-profit-yielding or not,) according to his *condition*, which shall be at once within his *power*, and suited to his *taste*.

Objections Answered.

Having considered the advantages promised by the proposed course of Intellectual Instruction, it may be of use now to consider the objections which may be urged against it.

Objection First: Supposed impracticability. Granting your endeavour to be good, the accomplishment of it will not be possible.

(17.) *Answer:* The experiment being yet to make, no answer can be deduced from experience, that is, from direct and identical experience. From analogy must be sought the only ground of assurance of which the nature of the case admits.

1. The first ground of assurance is this, viz., That the difficulties attendant on the reception of the mass of instruction in question, are not so great as it is natural that to a hasty glance they should appear to be.

One circumstance by which the difficulty will be apt to be painted in exaggerated colours is, the abstruseness of the names by which, in a number of instances, the branches of art and science are designated. This objection, having its root in prejudice, will be considered in the section allotted to the examination of opposing prejudices.

2. Another ground of assurance is constituted by the experienced strength of the newly devised instrument which will be employed, viz., the instrument composed of the helps to instruction, the assemblage of which constitutes the Lancasterian method. By this method, instruction has now, for several years, and with incontestable success, been administered in a like simultaneous manner, to a number of scholars as great as the number here proposed; indeed greater; forasmuch as, under the former plan, it being intended that of the whole number, a division should be made for some purposes, it will seldom happen that the instruction should be administered to the whole number at once.

To the branches of art and science here in question, the instrument in question was not applied on the occasion of the successful experiment; not to any of them, but, to a species of instruction which, in respect of real difficulty of reception (prejudice from novelty and unfamiliar names apart) will be found to exceed by far the species of instruction here administered at the earliest stage, by which the youthful mind will be so effectually prepared for the reception of ulterior instruction at the several ulterior stages.

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Notwithstanding the earliness of the age at which this instruction is proposed to be concluded, it may be affirmed with confidence that, of all the branches of instruction here proposed to be administered, there is not one the reception of which will, at the age at which it is proposed to be administered, be attended with a degree of difficulty as great as that which attends the reception of the art of reading and writing, at the age at which they are commonly taught according to the established practice.

Of all the branches of instruction, with the exception, perhaps, of mathematics, which under the proposed system is put off to the last stage, that which is composed of the rules of grammar, especially as applied to a dead language, will be generally acknowledged to be the most crabbed and repulsive; and in that respect opposed by the heaviest load of difficulty. Fortunately, the applicability of this system, with the most complete success, to the most difficult purpose, is already put out of doubt by experience. This is proved indisputably by the testimony of a witness, whose evidence on this subject, it is presumed, every one will admit to be decisive. See Letter of Mr James Gray, Master of the High School of Edinburgh. Appendix, No. III.

Objection Second: Disregard shown to classical learning, and other polite accomplishments.

(18.) Under the present system, no sooner are the first difficulties surmounted that stand in the way of the art of reading, the art of writing a legible hand, and the art of vulgar arithmetic, as comprised in a few of the first rules, than the scholar is more or less instructed in the rudiments of the Latin tongue. To this accomplishment, a preference is thus given as compared with all ulterior accomplishments. Under the proposed system of instruction, ornamental and respectable as it is, and necessary as it is to raise the scholar above the imputation of vulgar ignorance, it is in a manner put aside, and placed in the back-ground.

Answer: The disregard, if any, is only comparative, not positive. Considerable will be the disappointment of the contrivers of this plan, if at the end of the proposed six or seven years' course of instruction, conducted upon the principles here explained, the proficiency of the scholar in Latin and Greek, or at least in one of these languages, will not be found to outstrip, instead of falling short of the ordinary rate.

In as far as this expectation seems to be verified by experience, this objection falls to the ground.

But even supposing, that instead of being but comparative, which is as much as to say not real and effective, it were absolute, the objection would not, they confess, appear in their eyes a substantial one. By the middle rank of life, for the use of which the proposed system of instruction is designed, useful and not merely ornamental instruction is required. Except in as far as ornamental is considered as a species of useful, or a well-grounded acquaintance with his own language is regarded as useful, to one in a situation above that of a man whose subsistence does not depend on severe toil or manual labour, no degree of acquaintance with any of the dead languages can surely be placed to the account of use;—it cannot, unless in the case where it has been but the ladder by which the scholar has been conducted to a much higher degree of proficiency, have contributed in any considerable degree to the furnishing him with the means of securing a more comfortable subsistence, or have furnished him with the means of innoxious and inexpensive entertainment during his vacant hours; whereas the proposed system promises in an inexhaustible variety of ways, to be subservient to both those incontestably useful purposes.

For the purpose of any one of the learned professions, Law, Physic, or Divinity, no doubt but that an acquaintance with the dead languages, meaning the two classical ones of Latin and Greek, may well be considered a matter even of necessity, much more of simple use. But for any youth destined to the exercise of any one of those elevated professions, this system of education is not designed; and in the instance of any person so destined, should the parents condescend to give acceptance to the sort of instruction here proffered, what remains of the quantity of time at present allotted to a course of preparation for these professions, will afford ample room for additional instruction in those relatively necessary shapes.

Though with a view to the bar or the pulpit, not to speak of the bed of sickness, the possession of a considerable acquaintance with the dead languages may, in a general view, be considered as necessary, this necessity, especially if comparison be had with the system of instruction here proposed, will hardly be regarded as having place, with relation to a yet more exalted theatre, the House of Commons. Take two men, one of them capable of rendering into English without premeditation (not perhaps that any such person ever had existence,) any sentence whatsoever, in every one of the Greek and Latin classics extant, but unacquainted with any of the branches of art and science beyond common arithmetic included in this system,—the other acquainted with every one of them, in the degree in which an average scholar may be generally expected to be acquainted with them, but unable to render into English any such sentence, which of these two men, on the occasion of the ordinary details of parliamentary business, will be likely to find himself most at home? Without much danger of contradiction, the answer may surely be, he who has passed through the proposed course of practically useful instruction. The classical scholar may be better qualified for decorating his speech with rheto-

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rical flowers; but the chrestomathic scholar, after a familiar and thorough acquaintance has been contracted with things, with things of all sorts, will be, in a much more useful and efficient way, qualified for the general course of parliamentary business.

As to the classical authors, Greek and Roman, to any such purpose as the present, the question is not what they knew, but what, by the study of them, is at this time of day to be learnt from them, more than is to be learnt without reading them. Such is the question, and the answer is—not anything. Among the branches of art and science included in the present system of instruction, many there are of which they had not so much as a suspicion of their existence. With no one of them had they any degree of acquaintance approaching to that which is to be obtained from modern and English authors; and if on the part of any of them, any superior degree of acquaintance really had place, still no need is there of any acquaintance with the originals; forasmuch as there is not one of them of which a translation into English is not to be found. Not even for the purpose of history, were that comprised within the present scheme, would any acquaintance with these authors in the original be of any substantial use; for of the historians, at any rate, there is not one of which translations into English are not to be found. For the purpose of poetry and oratory—yes, let it be allowed; though the most illustrious of our poets, as well as some of our most impressive and efficient speakers, are known to have been destitute of all classical learning, except through the medium of translation, and that before any translations that are now read had come into existence.

Objection Third: Superficiality and confusedness of the conceptions thus obtainable.

(19.) A smattering of many things—a thorough or useful acquaintance with nothing, such will some regard as the species and degree of instruction afforded, on whom an unfavourable impression may have been made, by the very variety of the instruction here proposed to be communicated.

Answer: That in the case of no individual the result may prove to be of this undesirable kind, is too much to be asserted. But to any practical purpose, to any such purpose as that of determining the choice of parents, as between the proposed system of instruction, and such others as would be within their reach, the question is not, whether instances may not occur in which the result would be thus unfavourable, but whether, under the proposed institution, the inconvenience in question seems likely to be greater in degree, and of more frequent occurrence, than in such institution as would otherwise be the object of their choice.

In relation to this head, what is manifest is that, as antecedently to actual experience, even on the supposition of subsequent success, nothing of the nature of demonstration can be delivered, so neither antecedently to experience, ought anything of that nature to be demanded.

That under the customary system of instruction such should not unfrequently be the effect, is no more than may be reasonably expected. Why?

1. Because in preference, if not to the exclusion of things, the subjects of instruction are words, mere words.

2. Because in as far as things are among the subjects of instruction, many are talked of, few, if any, are exhibited and brought under the cognizance of sense.

3. Because no use is made of those leading principles of order, of which, under the system here proposed, so much advantage is taken: the calling first into exercise the faculties which are the first to ripen; the proceeding from the most simple subjects to the more complex,—that is, to the more and more complex, in which the more simple are respectively included; and thence the frequent re-exhibition of the same subjects; while the points of view in which they are thus represented on the different occasions are changed.

The bringing so many, and most of them such widely extending masses of instruction, within so comparatively small a compass in point of time, will be apt to be productive of a sort of doubt and jealousy which is too natural and too plausible, and, in a certain point of view, too well grounded to be suffered to pass altogether without notice. Such a variety and multitude of things crowded together,—and to attempt to force all these things at once into the minds of such young children! One thing must drive out another, instead of their being all of them learnt, at least to any useful purpose; and what at length may stick, will be no better than a confused hodge-potch, composed of odds and ends.

The smaller a man's acquaintance is with the several subjects of instruction comprehended in the proposed plan, the more formidable will the sum-total of them be apt to appear; and thence the stronger the impression which any obstacle of this tendency will be apt to make on his mind: and the misfortune is, that the number of persons whose state of mind will thus render them unfavourable to the plan is likely to be very great,—much greater than could be wished.

In proportion, however, as attention is given to experience, to established and incontrovertible matters of fact, this prejudice must diminish. Of the branches of instruction which present the most formidable aspect, viz. of the branches of Natural History and Natural Philosophy, with their respective hard names, there is not one to which a space of time will not be allotted, several times greater than the greatest that has been respectively allotted to the same branch of instruction, in the most particular courses,

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that are as yet known to have been anywhere delivered. In this instance the age of the learner will indeed be less mature than in any of those instances. But for the operation of this cause of inferiority, the allowance made will be ample. Nor ought it ever to be forgotten, however apt it may be to be forgotten, that the branches of knowledge which, by reason of the unfamiliarity of their names, present this formidable aspect, are in almost every instance less difficult to learn, than those dry and speculative grammatical rules, with their applications, and the tasks belonging to them, and the obligation that arises out of them, of penning discourses in prose and verse, in a dead language; those tasks which, because it has been the custom so to do, are without a thought about the difficulty, universally under the established system, put into the hands of children at ages less mature than the earliest of those at which, under this new system, it is proposed to apply to their youthful minds instruction in various forms, selected on account of their simplicity, and of the promise they afford of converting the sort of employment which hitherto has been the source of immediate and almost universal pain, into a source of immediate and absolutely universal pleasure.

Not less erroneous than disheartening would the inference be, if, from the observation of the smallness of the progress hitherto made in the old established branches of instruction, according to the old established methods, in the old established schools, any such inference were deduced, as that the nature of the case admitted not of any considerably more correct and complete body of instruction, or any considerably greater rate of progress. To the degree of inefficiency and slowness which, by original weakness, the result of the immaturity and barbarism of the age,—by original weakness, followed by habitual and day-by-day more firmly rooted prejudice,—is capable of being established, there are absolutely no limits. At Christ's Hospital, for example, to two or three years consumed in learning the rudiments of Latin grammar, succeed two or three years which are employed in forgetting those rudiments; while, in addition to the art of writing, the rudiments of arithmetic are endeavoured to be learnt. After the course thus completed of learning and forgetting, if a select few are applied to drawing, or reapplied to grammar, and to Latin and Greek taught by means of it; it were strange indeed, if in such a multitude, a small number were not actually found who wrote well, another small number who drew well, and another who, with or without the benefit of being sent to the university, to enjoy the provision attached to the school foundation, acquire in a greater or less degree that sort of acquaintance with the Greek and Latin classics which denominates a man a good scholar.

But from the examples of inefficiency and tardiness, were they even more egregious and numerous than they are, the inference would be not less unreasonable than discouraging if it were concluded that efficiency and despatch are impossible. It would be as if, from the abundance of snails and sloths, it were concluded that no such animal as a race-horse could have existence.

Among the great variety of subjects of instruction, comprised in the proposed system, doubtless the Lancaster exercise, and the mode of employing the pupils as teachers, are not applied to every one with equal advantage. But the conductors of the proposed system are aware of these difficulties, and alive to every practical expedient, for removing whatsoever disadvantages, as well as for making the most of whatsoever advantages the nature of each particular case may be found to afford.

Nor on this occasion should the advantage afforded by the proportioning earliness to facility, by teaching those things first which, in their own nature, are the easiest to learn, be ever out of sight. On the plan begun under an entirely different state of society, and continued by custom, the course of study being predetermined, and without regard to the state of the mental faculties, forced, or endeavoured to be forced, into the mind by terror and compulsion at its tenderest age; on this plan, measure is taken of the state of the faculties at the several different ages, and in each instance the species of instruction is fitted to it.

Objection Fourth: Uppishness a probable result of the distinctions thus obtained.

(20.) Against an accusation in itself so unsubstantial, it is no easy matter to make a substantial defence. The first thing to be done is to ascertain the meaning of the charge; and there is the difficulty. Let us hazard a conjecture. It is from the superior classes alone that such a charge can come. Coming from such a quarter, can anything but this be the meaning of it;—the superiority which in so many respects we possess over those whom we behold below us will be insufficient, and even the continuance of it will be precarious, if in respect of useful knowledge, in the several shapes in question, those who are now our inferiors should become our equals,—much more, should they become our superiors; for, continuing to receive at their hands that respect and obsequiousness which we possess at present, the wealth of such of us as have wealth, the power of such of us as have power, the dignity of such of us as have dignity, will no longer be sufficient.

On the subject of any such result, should it really be apprehended and regarded in the character of a grievance, two observations present themselves.

1. Supposing the apprehended result realized, the mischief of it does not seem very serious or explicit. Of the substantial causes of superiority, viz., opulence, power, and dignity, it does not well appear how their existence is

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threatened by it. Of one cause, or supposed cause, viz., the superiority in respect of useful knowledge, the amount will indeed be lessened, but by this, security will not in any shape be shaken or diminished. And if this be true, security remaining undisturbed, the gainers being so many more than the losers, while the loss is but comparative and not positive, how any balance should exist on the side of mischief seems not easy to determine. Nor at the expense of the higher classes will any such diminution of superiority in the single point in question—any such diminution of superiority in respect of useful knowledge—have place, any further than it is their own pleasure that it should have place. To add to whatsoever proficiency their now inferiors possess in respect of useful instruction, a superiority in all those branches of ornamental instruction, of which the exclusive possession will continue their own, will always depend upon themselves. To the supposed inferiors, no branches of useful instruction will be laid open, which will not be equally open to the supposed superiors. If under the impulse of emulation, or any other spring of action, they are driven to keep pace in improvement with those apprehended rivals, so much the better for themselves: if by indolence they are kept where they are, they have themselves to thank for it.

But whether in this supposed small and imponderable diminution of effective superiority, there would be more of good than of evil, seems hardly worth inquiry—the result itself not carrying on the face of it any such complexion as that of probability. Of the matter of wealth in all its shapes, the value will remain unchanged. The power which he who has most of it, possesses, not only over things, but over such persons as have less of it, will remain just what it is at present. The need which he who has less of it finds of securing all his share of it, will continue undiminished. The quantity of food which a man requires for his stomach, the quantity of clothes he needs for his back, will not be lessened by any quantity of useful knowledge with which he may have furnished his head. The mutual propensity which the good things of this world, in their several shapes of wealth, power, and dignity, have to attract each other, united in the same recipient, will not receive any sensible disturbance from the action of an agent comparatively so weak.

The shopkeeper will not have then less need than at present to sell his wares; the artisan and the husbandman to obtain employment; the scourer to wash her room; the fisherman to catch his fish.

From any such increase in the quantity of useful knowledge possessed by the middle classes, the only manifestly natural and probable results are, improvement in respect of health, domestic economy and personal comfort; a more extensive disposition than at present to look for amusement and recreation in art, science, or literature, in preference to sensuality and indolence. In all these ways will the condition of the middle classes be made better; and it appears not how, in any of them, the condition of their superiors should be made worse.

Look to experience: as far as any evidence is to be derived from that source, the evidence afforded is not in favour of the result here apprehended. Taking England for the place in question, two other countries present themselves as subjects of comparison, viz., Scotland and Germany.

In Scotland the first rudiments of useful knowledge, viz., reading, writing, and the arithmetic of accounts, are universal; in England, comparatively speaking, they are still but rare. Inferiors; are they in general less respectful in Scotland than in England? No; but, if there be any difference, rather more so.

This, it may be observed, is not precisely the species of instruction here in question. Well, then, let us turn to Germany, viz., particularly, if not exclusively, the Protestant part of it. There, in much greater amount than in England, is the higher species of instruction here in question abundant. Numerous, indeed, in those countries, in comparison of England, are the men of cultivated minds, the men of letters and science, such as they are; and there, in conjunction with literature, poverty, and its scarcely separable companion, sensuality, are nowhere to be found. From the extension thus given to mental culture, what man among them, howsoever clothed with opulence, and power, and dignity, has ever found or fancied matter of complaint; what pride, however pampered by all or any of these elements, has ever, from any such quarter, felt a wound?

But, notwithstanding all which has now been said of so superior a school of learning, the effect, it may still be urged, will be to fill the pupils with self-sufficiency, vanity, and pride, and to cause them to look down with disdain upon those employments to which they would otherwise have applied themselves without reluctance—employments upon which their chance for subsistence will depend.

Thus, whether the plan fail or succeed, objections, as is always the case with new undertakings, lie in store for it.

As to self-sufficiency, vanity, and pride, to which many other words of a similar stamp might be added, they are a set of sentimental words, the effect of which is to set afloat in the mind so many vague and indeterminate generalities; ideas which, to the eye of every one who takes the trouble of endeavouring to find for them a determinate shape, vanish and leave nothing behind them but the shapes of the letters and the sounds that we associated with them. On the part of the individuals in question, self-sufficiency, vanity, and pride, all these weaknesses, supposing them to have

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place, will find in the minds of those with whom they have to do,—with whom circumstances lead them to hold intercourse,—principles of resistance in the shape of self regarding affection and defensive pride, in which each transgression against the laws of social intercourse will find an eventual punishment; and in the apprehension of it, a check.

As to disdain for the means of livelihood on which they will be dependent for subsistence, the objection wears a face somewhat more determinate; but which, on examination, will be found not less hollow. Whatever sentiment of disdain any such individual may feel, neither the need he has, nor the need he feels, can by it receive any diminution. If, of these acquisitions, the effect be to open to him, and to place him in, a situation better in respect of subsistence than any into which he would otherwise have found his way, so far it is advantageous to him—clearly and determinately advantageous. If the effect be to leave him exactly in the same rank in which he would have found himself otherwise, he is thus far, though no gainer, no loser. But of all the conditions of life in which it is possible for him to find himself, there is not one in which, in various ways, he will not be the better, comparatively at least, if not absolutely, for the course of instruction and discipline he will have gone through. In his career through the proposed course of instruction, as has been fully shown already, he will have opened to himself sources in abundance of amusement, reputable as well as innoxious. If, in any degree, the instruction thus gained will operate as a cause of repulsion between himself and those who have not been partakers of it, it will operate as a cause of attraction between himself and those who so early with him have been partakers of it; and compared with the principle of repulsion, the principle of attraction operating in a more concentrated state, will operate with greater force. In the case of the great established schools, the agreeable and useful effect of early associations thus contracted, is universally notorious: in the instance of the proposed new sort of school, the more extraordinary, new, and distinguished the nature of it, the stronger the principle of association, together with the comforts and advantages derived from it, will be; and the individuals sharing in these benefits will be still more numerous than in any of those other instances.

As the system operates, the relative and comparative distinctions, advantageous upon the whole, or disadvantageous upon the whole, whichsoever they may be, will wear away; but the absolute one, strength given to the intellectual faculties and the whole character, will remain for ever.

As to the relative and comparative distinction, in as far as it is of an advantageous nature, the advantage it presents will be greatest and most conspicuous in the case of those whose parents and guardians are the first to put them in possession of it; and thus in this lottery, if it be to be accounted a lottery, the highest prizes will be for the first adventurers.

Relations

of the proposed to the existing Great Schools, Universities, and other Didactic Institutions.

(21.) Of the branches of instruction comprehended in this plan, some of them may be observed to have been included in the system of instruction administered in the dignified institution distinguished by the appellation of Royal. Chemistry and Physiology, a branch subservient to medicine, may serve as examples. In these branches, from that elevated seat, instruction was administered, not only to the maturest, but to some even of the most richly furnished, as well as dignified and exalted minds. But from their acknowledged aptitude, with reference to these superior and extraordinary minds, it would be an inference equally groundless and pernicious, that they are unfit, or in any degree the less fit, for ordinary minds; for minds of all sorts in the middle class, or even in some degree the inferior classes which this plan has in view. One thing it will not be easy to controvert, that, whatsoever degree of usefulness may belong to that institution, an indefinitely greater degree of usefulness must belong to the one here proposed: There, it was all amusement and decoration; here, to amusement, will be added solid and substantial use; there, it was confined to adults; here, it will be imparted, and indeed confined, to children, who, by it, will be raised to the level of men; there, it was, and is, confined to a few—even of the ruling and influential few; here, it will be communicated to a large, and, it is hoped, to a continually increasing portion of the subject many,—of those whose title to regard is founded on the most substantial and incontestable of all foundations, that of numbers,—and, in whose instance, the beneficial effect of useful instruction will be seen to rise in proportion to their present need of it.

In adverting to that dignified institution, nothing can be further from the minds of the persons thus speaking, than the design to lessen the respect so justly due to its originators and supporters. Their sincere wish is for its increase; and in some degree this desirable result is already afforded; since, by the encouragement it has given, in the way of fashion, as well as by the proof it has furnished in the way of experience, it has contributed to the formation of another institution which, in whatever other respect, and in whatever other degree inferior, promises to be so much its superior in point of extent; that is, in respect of the number of persons to whom the benefit, the blessing it may surely be called, will be imparted.

Relation of this plan to that of the Great Schools and Universities.

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On an occasion such as the present, it is impossible to be wholly unobservant, nor necessary to be altogether silent, on the subject of so many schools of royal and otherwise dignified foundation; topped by the two, or if Ireland be considered, by the three Universities of this land—not to speak of those of Scotland, which to those by whom ecclesiastical discipline is considered as the strongest bond of union, and diversity, on that same ground as a proper cause of separation, are proportionally regarded on the footing of foreign ones. Compare, on the one hand, the copiousness of the branches of instruction uniformly proposed to be administered; on the other, the smallness of the number customarily administered to one and the same person: on the one part, the preferable regard; on the other, the comparative disregard for immediate and extensive use: on the one part, the shortness; on the other, the comparative length of the time employed in administering such instruction: on the part of the unendowed proposed institution, the relative smallness; on the part of the antique and richly endowed institution, the largeness of the sums expended in the endeavours to produce the intended effects.

Obstacles and Encouragements.

(22.) So numerous and multifarious are the springs of action by which the members of every national community are drawn towards and repelled from each other, that scarcely in any instance can a plan of extensive utility be brought forward, much less a plan so full of promise as that which is here proposed, without appearing to be, and indeed without being, in its tendency, in some way or other, adverse to the interests of a considerable number of persons.

A plan which promises a mass of instruction, so much exceeding in quantity and value anything which has ever yet been exemplified, and that not only to the superior, by which is always meant the more opulent classes, but to the middle or less wealthy classes: not only to those whose means of living are derived from property already accumulated, but to those whose means are derived from industry perpetually employed, can scarcely fail to be an object of jealousy and envy to a multitude of persons exceeding that of those to whom it is a source of delight, and an object of hope.

To no person by whom any considerable value is set upon his own intellectual acquirements, can a continually increasing influx of young men, all of them in possession of acquirements in the same class superior to his own, be reasonably expected to be a spectacle of inward satisfaction. The greater the superiority thus manifested, and consequently the greater his relative inferiority, the more intense is the feeling of dissatisfaction that will naturally be produced. Envy and jealousy being passions by which the persons that harbour them are rendered the objects of aversion and contempt, are passions, the concealment of which is sought with proportionable solicitude. The person in whose breast these passions are concealed, will endeavour by all possible means to prevent this plan from taking effect. The apprehension, the cause of his secret suffering is, that by this school a superior degree of instruction will be obtained. But it is not by the expression of such an opinion, but by the expression of the very opposite opinion, that anything can be done by him towards the accomplishment of his purpose. The opinion which it will be his endeavour to propagate, will, therefore, be that no such superiority will, by means of the plan in question, be attained; and the stronger the persuasion with which he looks for the success of the plan, the greater the pains he will take to render other persons assured of its eventual miscarriage.

By the disguise with which it will be necessary for him to endeavour to conceal the nature of the motives by which he is actuated, and, if it were possible, the object which he has in view, the intensity of his aversion from its being in any degree repressed, will be perpetually increased.

Impracticability, uselessness, mischievousness, by the imputation of one or more of these qualities, will his attack upon it be conducted. By the two first, his endeavour will be to bring down upon it the contempt; by the other, the hatred, of the public: and the more completely he is convinced that no one of these qualities do, in any degree, appertain to it, the more strenuous will be his endeavour to produce in all other breasts the assurance that those qualities, each in the most perfect degree, do appertain to it.

Every one who has anything good to propose, always finds such men as these in his way.

The uncovering of what may be termed the nakedness of the human mind, is a most unpleasant task; but on no occasion can it be said to be an unnecessary one.

If by covering, with a veil of silence, all this body of hostility, it were in the nature of the case that the fire of it should be extinguished, or so much as slackened, silence would be no less consistent with prudence than favourable to ease and indolence. But by no such means can the passions of jealousy and envy be appeased; they admit not of any compromise; by being unmasked, and that ever so completely, they cannot be rendered more savage than they would be were the mask to remain untouched: masked they will do their utmost; unmasked they can do no more.

By the exposure thus made, it would not, therefore, be true to say that the chance of success has, in any degree, been lessened. On the contrary, since by no means is it in the nature of the case that hostility on this ground should be converted into amity, or even into indifference, the only course that presented any chance of guarding the proposed institution from its attacks, was to lay the plan as well as the cause of hostility to it open to public view.

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Under all this load of discouragement, there is one source of encouragement which, when duly considered, will have, it is hoped, the effect of taking off almost completely the pressure of it. The funds necessary for the commencement of the undertaking are already provided. The persons, and the only remaining persons, whose concurrence is requisite for the commencement, are the parents or other guardians of such children whose domestic circumstances and local situation concur in putting it in their power to avail themselves of the proffered service. If by them, and with reference to their own situation respectively, it be regarded as affording a sufficient promise of proving at once practicable and useful, and if useful, useful in a greater degree than any other place of education within their reach, it is not by any insinuation which it is in the power of envy or jealousy to throw out, that they will be diverted from that course which, on this supposition, will to their eyes be a source of delight, as well as a matter of duty. By no insinuation, by no declamations or protestations, will any such persons be persuaded that, by being so much more fully replenished and furnished with useful knowledge than other children—by being so much more fully supplied with that intellectual aliment of which the tendency to moderate and calm all dissocial and otherwise unruly passion is so powerful and so incontestible, there will be any the smallest danger of their being encumbered with any such turbulent and mischievous dispositions, the existence of which is thus pre-supposed.

To them it will not appear matter of certainty, that in a school in which neither irreligion, nor heterodoxy, nor schism, nor whatever be meant by heterodoxy or schism, will be taught, all or any of those abominations will be learnt. In their eyes any such suspicion will not appear better grounded than, to those systems of thinking which it professes to protect, it is injurious; as if the only chance of men's adherence to the most important and useful truths were an unassuageable fear and horror of all intellectual light—a voluntary, determined, and determinately perpetual blindness.

But these dissocial passions, this jealousy, this wretched envy, the prevalence of which has just been stated, (by the objection,) being to such a degree extensive, by the mere circumstance of his being a parent or guardian, will a man be exempted from their influence?

The answer is No. But whatsoever other persons may, to a parent's eye, be objects of jealousy and envy, his own child, and especially his own child at any such tender age, is not of the number. To a parent, how lowly soever his own lot in life, in general, the all but universal wish is to see that of his child raised as high as possible. In the promotion of this wish, two principles, two most powerful and constantly operating principles concur, viz., instinctive tenderness, and the reflection, that what exaltation soever it may happen to this object of his affection to receive at his hands, is his work, and a manifestation of his own power. In whatever line of life it happens to the parent to find himself placed, in that same line it is his most natural and most frequent wish, should any adequately favourable opening present itself, to see his child raised as much above himself as possible. Of the apothecary, the ambition is to see his child a physician of the highest eminence; of the attorney, to behold in his son a Lord Chancellor; of the parish clergyman, to behold in his an archbishop. The Lord Chancellor More, making his reverence and begging a blessing, as, in the great hall of Westminster, he was passing by his father, then sitting as a puisne judge in the Common Pleas: the puisne judge, and not the Lord High Chancellor, is the great object of envy to a paternal breast.

Adverse Prejudices obviated: Having thus presented, under one view, the advantages to be expected from the proposed course of instruction, it may be of use to consider the adverse prejudices likely to be opposed to it. These prejudices may be comprised under two heads, viz., 1. Novelty of the plan; 2. Abstruseness of the subjects.

(23.) In respect of selection and order of priority, the assortment of subjects proposed to be taught will at first sight be seen to be in a very high degree different from everything which custom has hitherto brought to view.

This difference is most explicitly acknowledged. It presents an unquestionable demand for satisfactory reasons; but the reasons by which it was suggested are at hand; and to these reasons the appellation of satisfactory ones, will not, it is hoped, be refused.

In the order here stated, as being recommended by custom, it will be seen, that originally it was equally well recommended by reason; but that by a change of circumstances the recommendation which it originally received from reason, has been cancelled; that custom, blind custom, is the only base on which it stands at present; the indication of reason stands opposed to it.

Order of invention, order of utility, and order in respect of facility: between these three principles of arrangement there is no small difference. That it is by the joint consideration of the order of utility, and the order of facility, that the order of instruction ought to be determined, is sufficiently apparent. But if so, the order of invention, were it not for the custom of which it has become productive, would be a matter of accident, scarcely possessing, unless on the score of curiosity, any claim to regard.

Yet so it is, that by the order of invention, the order of instruction has, in a main degree, been determined. Nor in the coincidence is there anything that need surprise us. By the order of invention, men's thoughts were

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determined to run on in that track. And failing determinate and sufficient reason to the contrary, the track in which men's thoughts have begun to run, is the track in which it is desirable and useful that they should continue.

To the proposed plan of instruction, the quality of usefulness possessed by it, in a pre-eminent and incontrovertible degree, is without hesitation attributed, inasmuch as, of all the several branches comprehended in it, there is not one that may not be found to be continually applicable to all the several purposes of common life; and that not only of the more or less elevated, but of the very humblest spheres. True it is, that when these several branches come to be mentioned by their names, these names being, in most instances, the designation of branches of instruction hitherto but little cultivated, the names, and consequently the things themselves will, to the generality of readers, be apt to be regarded as remote from common use. But when by an example or two, the practically useful application of these seemingly abstruse and hitherto formidable sciences is brought to view, and when the cause why the number of persons acquainted with them is as yet so small, is seen to be not in any deficiency in the article of practical usefulness, but in the recency of the discoveries by which they have been brought to their present state of comparative perfection, and in the accidental circumstances which occasioned a preference to be given to other less useful studies, the conception of their inutility will scarcely be long in giving way to the clearest and firmest persuasion of their pre-eminent and universal use.

(24.) If they are abstruse, it is because they are uncommon; if they are as yet uncommon, it is because it is only of late years that their general usefulness has received such increase, as to form a body of instruction capable of being announced in the character of a thing universally useful to the universality of learners.

Chemistry and mechanics, for example, are formidable names. But when once that which cannot be denied has been understood, viz., that it is from chemistry alone that a man can learn how to apply fuel to the best advantage, or how to guard himself most effectually against destruction by fire or poison; and that from mechanics alone, he can learn how to apply his labour to the best advantage, with or without the assistance of machines and other instruments; when once these things have with any tolerable degree of attention been considered, whatsoever disgust or distaste, whatsoever awe or jealousy may have been excited by their as yet unfamiliar names, may surely not unreasonably be expected to give way, not only to complacency, but to desire.

Accordingly, whatsoever practical and familiar utility is seen to belong to these several branches of scientific instruction, will be carefully looked out for, and completely and diligently held up to view; and placed in the most amusing, as well as clear and instructive, light; the design of this institution being, not to raise up a few scholastic pedants, but to breed up, in every walk of life, a numerous and continually increasing succession of intelligent and useful, and, as far as the condition of human beings in this life admits, contented and happy men; not to pamper pride, but to assist and cherish personal freedom, and general benevolence.

Let us not suffer ourselves to be either horrified or disgusted by a few words, which because less familiar than those which we are most accustomed to, are called hard names—names, without which the several branches of knowledge, which are not only among the most useful, but to a greater or less extent even the most generally familiar, could neither be distinguished from each other, nor so much as expressed. Let us not conclude, that because, without teaching, they are not, to any extent, generally understood by grown men, therefore, *by* teaching, they are not capable of being made to be understood by children.

In the sort of view, which in this first stage of instruction it is proposed to give of the several sciences comprised in it, let us but consider what there is in them respectively, that so much as to a child of eight years old, can prove difficult or formidable.

1. Botany, for example, what is it? An acquaintance more or less correct and extensive with the external appearances of the different sets of plants. Not only a working gardener, but every common labourer in husbandry, every green-grocer, every herb-woman, is, to a certain degree, and in the same way, a Botanist.

2. Zoology. Being of Greek extraction, and not in very common use, the name is a hard name. But, in the same mode as here proposed, not only every labourer in husbandry, but every man, without exception, is, in respect of such animals as have fallen in his way, a Zoologist. Every man, woman, and child, to whom there has been given the amusement of seeing a collection of birds and beasts, has received a lesson in Zoology—a lesson of the sort here proposed.

3. Mineralogy. To a certain extent, every labourer's man employed in the working of a mine, is a Mineralogist. So is every labourer in husbandry, by whom sand, gravel, loam, marl, or chalk, are dug, or lime burnt. The acquaintance which the labourer in mines has with Mineralogy, is confined to the production of his own mine. The acquaintance which, in the proposed school, a scholar, at the first stage, will have with the same science, will be less particular, though more extensive; indeed, as extensive as it can be made.

4. Astronomy. So large and so far distant from us are the subjects of this science, that the very name of it is enough to strike us with awe. But the first astronomers, it is well known, were shepherds in the regions of the

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East; the clearness of the sky afforded them this relief from the pain of mental vacancy. Beyond those shepherds, the young scholars will not have to go, except in as far as it may be carried by the addition of representations to realities.

5. Geography. Of this branch of science the name is not quite so formidable as the names just passed under review. In this country few even of the labouring classes but have seen globes, and in general have heard the use of them; none who can read but have seen the use of maps. Yet, of these five branches of science, geography, even at this its earliest stage, is the most abstruse. Why? Because, except to the extent of the prospect which a man carries with him, representations are here substituted for, not added to, realities. As to the solution of geographical problems, these belong not to this proposed first stage of instruction, but to the second; in which geography is considered as belonging to Natural Philosophy, and as such coming under the cognizance of judgment, as well as of sense and memory.

General Concluding Observations.

(25.) On the one hand, the quantity of instruction raised to its maximum; on the other hand, the quantity of punishment and reward employed in the production of that effect, sunk to its minimum; in a word, profit maximized, expense minimized: such, in the instance of the inferior order of schools established in pursuance of the system invented by Dr Bell, (inferior in respect of quantity and variety of instruction, but not in respect of importance,) has been the promise made: such, as far as evidence extends, whether of the direct cast or of the circumstantial, as deducible from the working of the system, is the promise that has everywhere been fulfilled.

Such, in the instance of the superior order of schools, of which a commencement is here proposed to be made, may, with not less confidence, be, it is hoped, expected.

Thus, not only will the reign of juvenile terror be everywhere at an end, but those occupations which, till so lately, have in all schools, to almost all scholars, been a mere burthen, will be converted into pastime; and those hours which, to us and our forefathers, were hours partly of irksome labour, partly of joyless and listless idleness, will to our progeny be hours of sport and gaiety. All work and no play makes Jack a dull boy: such is the concession made, the plea pleaded, by the homely proverb, in favour of unprofitable pastime. That by all play and no work, Jack would ever be made a learned boy, is a result, to the truth of which neither proverb nor prophecy had ever dared to look. But, by Dr Bell, that fiction of the golden age, which the boldest of prophets would never have dared to prophesy, has actually been accomplished.

If by Jenner human life have been rendered longer, by Bell it has been rendered, in a still greater degree, happier: pain being banished and pleasure substituted, and that during the period when the little bosom is most sensible to both.

Compared with all other new institutions, the proposed Chrestomathic School will have this singularity in its favour, viz., that not only will its practicability have been proved, but even its success assured before it has been tried. In the application which the principles of it have already so abundantly received, all difficulties have already been overcome. As far as concerns the scholars, if the field of instruction will in this new case receive increase, yet, it may be safely and confidently asserted, that the thorniest of all fields, are those in which the success of this new species of culture has received such ample and uncontested proof; and that the new and higher portions of ground now prepared to be enclosed, and put into the corresponding course of cultivation, are, with little or no exception, not only less beset with thorns, but most abundantly adorned with flowers—flowers altogether without parallel in those lower regions. Exists there so much as a single ground for believing, or so much as supposing, that in the instance of any one of the branches of art and science proposed to be superadded, success will be less certain, or less universal, than in those cases in which the completeness and universality of that success has so long been placed out of doubt. If there be, it lies upon him in whose bosom any such doubt or suspicion has arisen, to settle with himself, and produce the grounds of it.

GROUNDS OF PRIORITY.

(26.) [*Natural Pleasantness.*] At the dawn of reason more especially, an object is the more *pleasant*, the more exclusively it presents itself to *the senses*, especially to the senses of *sight* and *hearing*; and, accordingly, the less forcibly it applies itself to the *understanding*, calling for the exercise of the *judgment*, on an extensive scale. Hence the various *sensible forms*, presented by *nature* and *art*, particularly by *nature*, are objects which, at this early period, present in general a stronger interest than is presented by *transactions*, such as are produced by the mutual intercourse amongst persons of mature age: objects of natural, or as it is called *physical*, than is presented by objects of *moral*, including *political*, knowledge. *Birds* and *Beasts* (subjects of *Zoology*) are, by themselves or their images, plane or solid, among the most pleasant and interesting objects that can be presented to the observation of children at their earliest ages.

(27.) [*Artificial Pleasantness.*] Under the new mode of instruction, a sort of pleasantness, not the less real for being *artificial*, i. e. for being the product of reflection and ingenuity, is imparted to all subjects: not excepted the most abstruse ones. But, this being the same on all *occasions*, and to whatsoever *subjects*

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applied, the *natural* degree of pleasantness or unpleasantness will remain to each unaltered.

(28.) [*Corporeal—Incorporeal.*] *Corporeal*, or *bodily:* viz. *natural* substances, such as *stones, plants*, and *animals: artificial* substances, such as *buildings, furniture, clothing, tools*, articles of *food* and *drink;* and the *materials*, wrought or unwrought, *of* which, and the *tools* and other *instruments with* which they are respectively composed:—*Incorporeal;* such as, *interest* of money lent, *rents* issuing out of land, and other similar subjects of property; political *offices, conditions in life*, resulting from *genealogical* relations; such as those between *husband* and *wife, father* and *child, guardian* and *ward, master* and *servant*.

(29.) [*Concrete.*] From a Latin word, which signifies *grown up along with;* viz. along with the subject which is in question, whatever it be: it is used in contradistinction to the word *abstract*, derived from a Latin word which signifies *drawn off from:* viz. from the subject in question, as above. An *orange*, for example, has a certain *figure*, whereby, in connexion with a certain *colour*, it stands distinguished from all other fruits, as well as from all objects of all sorts. Take into consideration this or that *individual* orange, the ideas presented by the *figure* and *colour*, whereby it stands distinguished not only from other fruits, but even from other *oranges*—from other fruits of the same kind—are *concrete* ideas: for, they *grew up*, as it were, together in the mind, out of the individual object, by which they are excited and produced: they are amongst the *elements*, out of which the aggregate conception, afforded and presentible to us by that individual object, is formed. The orange being no longer in sight,—now, of the figure and colour observed in that individual orange, consider such parts or appearances as are to be found in all *other* oranges, as well as in *that* one. The idea thus formed is *an abstract idea:* it being a portion *drawn off*, as it were, from the *aggregate idea* obtained, as above, from the *individual object*. Being abstracted and slipt off from the individual stock, and thereupon planted in the mind, it has there taken root, and acquired a separate and independent existence. Without thinking any more of that individual orange in particular, or of oranges in general, or of so much as of *fruits* in general, take now into consideration *figure* at large, and *colour* at large: Here, at one jump, the mind has arrived at an idea, not only *abstract*, but vastly *more* abstract than in the case last mentioned. Instead of *figure* and *colour*, let us now say *sensible qualities*. Under this appellation are included not only *figure* and *colour*, but *smell, taste*, and many others: it is therefore *abstract* in a still *higher* degree.

(30.) [*Complex or complicated.*] Understand, with the exception of that species of *complexity* or *complicatedness*, which has place in the case of *concrete*, as contradistinguished from *abstract* ideas. Whence (it may be said) comes this exception? Answer: from hence; viz. that though, in other cases, the more complex the idea is, the greater the labour of mind or force of attention is, which is necessary to the obtaining the conception in a clear and correct state, *that* is not the case here. No portion of matter ever presents itself to *sense*, without presenting, at one and the same time, a multitude of *simple* ideas, of all which taken together, the *concrete* one, in a state more or less correct and complete, is composed. At the same time, though naturally all these ideas present themselves together, the mind has it in its power to detach, as above, any one or more of them from the rest, and either keep it in view in this detached state, or make it up into a compound with other simple ideas, detached in like manner from other sources. But, for the making of this separation—this abstraction, as it is called—more *trouble*, a stronger force of *attention*, is necessary, than for the taking them up, in a promiscuous bundle, as it were; in the bundle in which they have been tied together by the hand of Nature: that is, than for the consideration of the object in its *concrete* state.

(31.) [*Cause and Effect.*] On all these accounts, but especially the last, the juvenile mind will be earlier prepared for the reception of instruction, with reference to *Natural History* (Stage I.,) than to *Natural Philosophy* (Stages II. III. IV. V.): and, as between these,—forasmuch as, in each of these stages, the subjects included in it add more or less, if not to the *extent*, to the *number* and *variety* of those included in the preceding stage or stages,—it will be better prepared for the branches contained in Stage II. alone, than for those contained in *that* and Stage III. together; and so on as to the rest.

(32.) [*Name of the Art or Science.*] A cloud of perplexity, raised by indistinct and erroneous conceptions—a cloud of perplexity, and consequent difficulty of expression—seems to have been, at all times, hanging over the import of the terms *art* and *science*. A few lines, it is hoped, will not be found altogether misemployed in the endeavour to dispel it.

The common supposition seems to be, that, in the whole *field of thought* and *action*, a determinate number of existing compartments are assignable, marked out all round, and distinguished from one another, by so many sets of natural and determinate boundary lines: compartments, whereof some are filled, each of them by an *art*, without any mixture of science; others, by a *science* without any mixture of *art:* others, again, so constituted that, as it has not ever happened to them hitherto, so neither can it ever happen to them in future, to contain in them any thing *either* of art *or* science. On some such supposition accordingly, appear to be grounded questions such as the following:—*how many arts* are there? how many *sciences*? such a *thing* (naming it,) is it *an art*, or is it *a science*?—i. e. such a

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word (mentioning it,) is it the *name* of *an art*, or is it the name of a *science*?

This supposition will, it is believed, be found in every part erroneous. As between *art* and *science*, in the whole field of *thought* and *action*, no one spot will be found belonging to either, to the exclusion of the other. In whatsoever spot a portion of either is found, a portion of the other may be seen likewise. Whatsoever spot is occupied by either, is occupied by both: it is occupied by them in *joint-tenancy*. Whatsoever spot is thus occupied, is so much taken out of *the waste*: but neither is there any determinate part of the whole waste, that is not liable to be thus occupied.

Practice, in proportion as *attention* and *exertion* are regarded as necessary to due *performance*, is termed *art*: *knowledge*, in proportion as *attention* and *exertion* are regarded as necessary to *attainment*, is termed *science*.

In the Latin language, *both* are with great advantage comprehended under one common appellation, viz. *disciplinæ*, from *disco*, to learn: *disciplinæ*, with which our English word *discipline* agrees in sound as well as in derivation; but, by the narrower import which has been attached to it, may probably be regarded as having been rendered unfit for this use.

In the very nature of the case, they will be found so combined as to be inseparable. Man cannot *do* anything well, but in proportion as he *knows* how to *do* it: he cannot, in consequence of *attention* and *exertion*, *know* anything but in proportion as he has practised the *art* of *learning* it. Correspondent therefore to every *art*, there is at least one branch of *science*: correspondent to every branch of *science*, there is at least one branch of art. No determinate line of distinction between *art* on the one hand, and *science* on the other: no determinate line of distinction between *art* and *science* on the one hand, and *unartificial practice* and *unscientific knowledge* on the other. In proportion as that which is seen to be *done* is more conspicuous than that which is seen or supposed to be *known*, that which has place is apt to be considered as the work of *art*: in proportion as that which is seen or supposed to be *known*, is more conspicuous than anything else that is seen to be *done*, that which has place is apt to be set down to the account of *science*. Day by day, acting in conjunction, *art* and *science* are gaining upon the above-mentioned waste — the field of *unartificial practice*, and *unscientific knowledge*.

Witness *Electricity*, *Galvanism*, (see Stage II.) *Geognosy* or *Geology*, *Aerostation*, (see Stage III.) *Botanical* and *Zoological Palæology* (knowledge regarding the remains of plants and animals deposited, according to appearance, at remote times in the bowels of the earth,) a branch of science appertaining in common to *Botany* and *Zoology* (see Stage I.) on the one hand, and *Geognosy* (see Stage III.) on the other. Under an *old name*, even *Chemistry* (see Stage II.) includes an immense mass of art and science, all *new* within these few years. Of late years, *Nephelognosy* (if by this appellation may be designated the long chain of partial observations, which have recently taken the *clouds* for their subject) has become a candidate for existence. So, in the department of *morals* and *politics*, *Statistics*: a newly cultivated branch of *Geography*, having for its subject the quantities and qualities of the matter of *population*, of the matter of *wealth*, and of the matter of *political strength*—existing or supposed to exist, on the *territory*, or in the *political state* to which it applies.

While new branches of art and science have thus been starting up, and putting themselves upon the list, others have dropped out of it: the case being, that, either on the one hand something, which had been supposed to be *done*, has been found *not* to have been done, nor to be, for anything that appears, *capable* of being done; or, on the other hand, that something which had been supposed to be capable of being *known*, has been found, according to all appearance, destitute of existence, and on that account not capable of being known.

Witness *Alchemy*, or the art of transmuting other metals into gold: with or without the art of composing a medicine, fit for the cure of all sorts of disorders whatsoever: those of the most opposite nature not excepted. 2. *Astrology*, or the art of discovering future events, affecting the prosperity of individual inhabitants of the earth, by looking at the stars. 3. *Necromancy*, the art of discovering future events by conversing with the dead: to which may be added a cluster of other arts or sciences, all ending in *mancy*, and having for their objects the deriving knowledge concerning future events, from so many different sources, from no one of which is any such knowledge to be obtained.

As between *art* and *science*, in so far as they are distinguishable, *art* is that one of the two that seems entitled to the first mention, as being first and most independent—in *value*, and thence in *dignity*, in so far as dignity consists in *use*: for, of *science*, the value consists in its subserviency to *art*; of *speculation*, the value consists in its subserviency to *practice*. Of the two, *art*, when it is not itself the *end*, stands nearest to the end: with reference to this end, whatsoever of *science* stands connected with it, is but as a *means*. But if, independently of all connexion which it has with *art*, *science pleases*, then, in so far as it pleases, it is *of use*: for *use* itself has neither *value* nor *meaning*, but in virtue of, and in proportion to, whatsoever relation it has to *pain* or *pleasure*.*

* Persons to whom the account thus given of *art* fails of being satisfactory, may find a very different account of it in *James Harris's* 8vo volume, intitled "*Three Treatises*:" one of which is, the whole of it, expended upon a definition of this word: without any mention (as far as memory serves) of the word *science*.

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(33.) [*Antiquity.*] Between the degree of *natural preparedness*, on the part of the mind, for the reception of a branch of instruction, be it what it may, and the *antiquity* of it, as measured by the length of time that has elapsed, since instruction in it happened first to be administered—no immediate and necessary connexion can be shown to have place. *In* time indeed, but not *by* time are things done. *Experience, observation, experiment;* in these three words may be seen the sources of all our knowledge. Of these, *experience* is without effect, any farther than as it has had *observation* for its accompaniment; and, in the very idea of *experiment*, that of observation is included. Upon *observation* therefore it is—upon *observation*, that is upon *attention* applied to the subject with effect—that everything depends. Numerous and various are the natural objects, which, when once, by minds matured for the purpose, they have been *observed* and thereupon *denominated*, find the infant mind in a state of the most perfect *preparedness* for their reception; but which never happened to be taken for the subjects of *observation*, nor therefore of *denomination*, till within these few years.

To the infant mind, few objects can be more *interesting*—none are there, of which the external characters are more *readily* apprehensible—than those which belong to the field of *animated nature*. But, for the most part, what acquaintance we have with the objects which belong to this part of the field of thought and action, is of very modern date.

(34.) [*Number of teachers and learners.*] A circumstance on which the *antiquity* of a subject of knowledge has *no* influence is, as above, the *natural preparedness* of the juvenile mind for the reception of it. But a circumstance, on which that antiquity has great influence is—the *number* of the persons who, at the time in question, are engaged in the *teaching* of it, and thence the number of those who are engaged in the *learning* of it: desire to *learn* on the one part, and desire to *teach* on the other, being two circumstances which, with relation to one another, are both *cause* and *effect*. Cases to a comparatively small extent excepted, (for example, that which has place where the advantage derivable from teaching is made the subject of a monopoly,) whatsoever be the real and intrinsic value of a branch of learning, those who *have learnt* it, and those who *are teaching* it, have, each of them, an interest in magnifying it, and causing it to be cultivated to the greatest extent possible: *learners*, as well as *teachers*, lest their labour should be thought to have been bestowed in vain; *teachers*, that the number of their customers may be as great as possible. Among the known subjects of intellectual labour, not many, it is believed, can be pointed out that have less in them of intrinsic use, especially since the stock of *translations* has been completed, than the *dead* languages. Yet, of these, there are incomparably a greater number of teachers, and thence of learners, than of all other branches of learning put together, the very *elementary* ones, viz., *reading, writing*, and *arithmetic*, alone excepted. Why? Because the study of those keys to knowledge has continued to be cultivated from the time when, the above-mentioned elementary branches excepted, there was very little known that was worth *learning*, still less for which *teachers* could be found.

STAGES.

(35.) [*Introductory Stage.*] The branches of instruction, thus referred to an introductory stage, are the same as those which are comprehended in the course of instruction carried on in that *new method*, which, though applicable with equal advantage to the situation of the *highest*, has not as yet been applied to any other than that of the *lowest*, ranks in life.

In this introductory stage, to a degree more or less considerable, the matter of instruction cannot fail of coinciding with, and thus anticipating, the matter here allotted, for the first and earliest, of the five stages *peculiar* to the hereby proposed school. *Words*, for example, it cannot but have to operate upon: and—the words, of which, in the first of these *principal* and *peculiar* stages, the matter of instruction is composed, being such as are adapted to the very earliest age—of this sort, with at least as much propriety as of any other sort, may be the words employed in the *introductory* stage already in use. Again: *Writing* is among the *Exercises*, allotted to the first Chrestomathic Stage. But *writing* is itself but a mode of *drawing;* nor that the easiest mode. *Geometry* will, among its figures, present some still more simple, than some of the *letters*, of which *written discourse* is composed.

(36.) [*Mineralogy.*] From two words, one of which, derived from the Latin, signifies belonging to *mines* (mines being the places from which the most interesting among the subjects of this branch of science, are extracted,) and a Greek word, which signifies *an account*, or *giving an account of*. In this first stage, the subject, in so far as teachable by exhibition of *figure, colour*, and other sensible qualities, will be taught, without reference made, as in *Chemistry* and *Geognosy*, to *causes* and *effects* more or less remote.

(37.) [*Botany.*] From a Greek word, which signifies a *plant* or *vegetable*:—to be taught, as above, without reference to the relation of *cause* and *effect*, except in so far as indication of the manner of *propagation* comes to be made.

(38.) [*Zoology.*] From two Greek words, one of which signifies an *animal*, the other *an account*, as above:—to be taught as above.

Under *Mineralogy* will be presented to view those bodies and portions of matter, in which

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no sort of life is found: under *Botany*, those which have *vegetable* life, *i. e. birth* and *growth*, as well as *death*, but, as far as appears, without *feeling*: under *Zoology*, those which have *animal* life, *i. e.* not only, as plants, *birth*, *growth*, and *death*, but *feeling*, as far as appears, with more or less of *thought*. On these subjects, the *Exercises*, prescribed and performed, will, as far as circumstances admit, be accompanied with the *exhibition* of *specimens*; specimens, *dead* and even *living*: as well as *draughts* or *models* of specimens. See Table II. Col. 1-3.

(39.) [*Geography.*] From two Greek words; one of which signifies *the earth*, the other *delineation* or *description*: the *familiar* or *purely geographical* branch, viz., that, for the teaching of which, *maps*, with the requisite verbal explanations, are sufficient: dismissing to Stage V. 4. the *scientific*: viz., that by which are exhibited the facts and appearances, resulting from the connexion which the earth has with the *sun*, the *moon*, and other parts of the universe visible to our eyes.

(40.) [*Geometry.*] From two Greek words; one of which, as above, signifies the *earth*, the other *measurement*. From this derivation it appears, that, among the Greeks, the first application which this branch of art and science received was, that of being employed in measuring, for the purpose of ascertaining ownership, portions of the *earth's surface*: such as Fields, Gardens, and the sites of Houses. But it is now applied to portions of apparently void *space*, as well as to *bodies* of all sorts and sizes, imaginary as well as real, in so far as considered with a view to nothing but their *figure*.

From this stage, the *demonstrations*—as requiring too *many* objects, and those not in themselves interesting, to be held at the same time in the *memory*, and too strong a *hold* to be taken of them by the *attention*, for the purpose of forming a ground for the *judgment*—will be dismissed to Stage V. and last. So likewise even the *enunciative* parts of the *propositions*: except perhaps in the instance of a few of the most simple and easily conceived. Remain the *definitions*; for the illustration of which, the most familiar specimens, such as *rules*, *pencils*, *slates*, *marbles*, *balls*, *tops*, &c. will be employed. As to the *demonstrations*, from the proposed postponement, no real inconvenience can, it is presumed, result. On no other subject, with so little danger of error as on that of geometry, can propositions be delivered to be taken upon trust. Be the art or science what it may, incompetence, as to the reception of *some* particulars belonging to it, affords no reason for withholding from the juvenile mind any *other* particulars, to the reception of which it is competent.

(41.) [*Historical Chronology.*] *Historical*, from a Greek word, which signifies originally *knowledge* at large; but which, in the use commonly made of it, is at present confined to knowledge, or supposed knowledge, relative to *past events*: principally to such as are of a political nature; such as *wars*, *conquests*, *changes of government*, &c. *Chronology*, from two Greek words, one of which signifies *time*, the other an *account*, as above. *Historical Chronology*: i. e. *History* in so far as exhibited by *Chronology*, considered in no other than the *familiar* point of view: consisting of indications given, of the principal events, known or supposed to have happened to mankind, mentioned, in the briefest manner, with reference to the portions of time, in which they are respectively supposed to have taken place: the mention so made not being accompanied by any of those statements or observations, relative to their supposed *causes* or *effects*, or relative to the characters of the respective actors, whereof the matter of what is generally meant by the word *History*, is composed. History, thus as it were *clothed*, will be reserved, partly for a higher *stage* in this same school, partly for a maturer *time of life*. For another branch of *Chronology*, which stands higher, and belongs to *Natural Philosophy*, see Stage V. 5.

By the difference between *to-day*, *yesterday*, and *the day before*, application being made of the *numeration table*, a child, at its very exit from infancy, will have been found prepared for *Historical Chronology*, as above described: the import, attached to the words designative of the several events, becoming by degrees more and more clear, correct, and complete, as the course of instruction advances.

Exercises in Historical Chronology will be afforded by *Tables*, *Charts*, and *Memoriter verses*; and, in return to correspondent *questions*, *Answers* written and repeated in prose.

(42.) [*Biographical Chronology.*] *Biographical*, from two Greek words, one of which signifies *life*, the other a delineation or *description*, as above. In this instance, as in that of *Historical* Chronology, the miscellaneous matter will for some time be dismissed, as above. *Exercises*, much the same.

(43.) [*Appropriate Drawing.*] *Appropriate*, viz. correspondent: on the one hand, to the state of the *bodily faculties*, and the degree of *proficiency* thence attained; on the other hand, to the particular nature of the branch of *art* and *science* to which, in the character of an *organic test of intellection* (See Tab. II. Col. 1, 4, 9.) application is made of this art.

As to *earliness*—the first rude essays in *drawing* cannot take place *too soon*. *Writing* is but a particular branch or application of it. Not to speak of *mineralogy*, with the right lined angles exhibited by its *crystals*,—and even *Botany* and *Zoology*, as exhibited by some of their outlines,—*Geometry* affords forms still more easily traceable upon *sand* or *slate*, than those which are produced by *writing*, under the name of *letters* and *words*.

Of the term *appropriate drawing*, the import will consequently be *shifting* at every successive stage: the *figures* delineated being, throughout, such as appertain to the branches of

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learning included in the stage in question, as well as the preceding ones.

By the several Branches of *Natural History learning*, comprised in *this* Stage, is furnished the *matter*, upon which the juvenile mind will have to operate, in the course of the several *succeeding* stages. The more familiarly it has become acquainted with them, when presented in this most simple point of view, the less the difficulty it will experience, in its endeavours to comprehend the *propositions*, of which they will be taken for the *subjects*, in the course of the succeeding stages.

By the hands of *Chemistry*, the *inward* constitution and composition—the *latent* properties—of all those several *natural* modifications of matter, will, principally by means of *mixture* and different doses of combined and uncombined *caloric* (different degrees of heat and cold,) be laid open and brought to view.

(44.) [*Mechanics in the limited sense of the word.*] *Mechanics* from a Greek word, which signifies a *machine*, an *engine*, a *contrivance*. In the *limited sense of the word*; viz. in the sense in which it is employed for the designation of the several distinguishable classes of configurations, contrived principally for the purpose of gaining *force* at the expense of *despatch*, or *despatch* at the expense of *force*. These are, 1. the *lever*: 2. the *wheel*, turning upon a fixed axis: 3. the *pulley*, or *shifting wheel*: 4. the *inclined plane*: 5. the *screw*: 6. the *wedge*: to which hath of late years been added, 7. the *funicular machine*; and are now designated by the common appellation of *the mechanical powers*. This *limited* sense is the only original one: the only one attached to the word, in the language from which it is derived.

Within the last two hundred years, the species of *force*, to a compromise, as it were, amongst which all distinguishable bodies or masses of *matter* appear to be indebted, for the *quantity* of *matter*, the *form*, and the *texture* which they respectively possess, have been brought to light. These are, 1. *Attraction of gravity*, a tendency possessed, not only by all the matter of which our *earth*, but by all the matter of which any part of the visible *universe* is composed. 2. Attraction of *cohesion*, the perceptible operation of which is confined within distances too small to be distinguished by human sense. 3. *Elasticity*: i. e. a principle of *repulsion* corresponding to, and antagonizing with, the attraction of *cohesion*: 4. Attraction and repulsion, having place in the case of *Magnetism*. 5. Attraction and repulsion, having place in the case of *Electricity*. 6. Attraction and repulsion having place in the case of *Galvanism*. 7. Attraction, termed *elective*, belonging to the province of chemistry, and, from the French, commonly, though rather unhappily, expressed by the term *chemical affinity*. N. B. in regard to these *three* or *four* last species, it seems not at present, altogether determined, how far they coincide, and how far, if at all, they stand distinguished from each other.

To the head of *Mechanics*, taken at *large* (including or not including *Mechanics*, taken in the *limited* acceptation of the word, as above) seems now to be generally referred what appertains to the three first of the above seven general principles, together with whatsoever changes or arrangements are regarded as capable of being brought about, or secured, in any mass or masses of matter, without any such change in the arrangement of their undistinguishably minute constituent elements, and thence in some of their external characters, as those which it belongs to the *Chemist*, as such, to produce or bring to view. In regard to *Magnetism* and *Electricity*, in so far as the motions, which have place on the occasions on which those words are employed, are seen to extend to *measurable* distances, they seem to be considered as belonging to the head of *Mechanics*: in so far as the distance in question is so minute as to be *incapable* of *measurement*, they seem to be considered as belonging to the head of *Chemistry*.

By all the several instruments above spoken of under the head of *mechanical powers*, motion is *transferred* and *modified*; by none of them *produced*:—in all of them motion finds a *channel*; in none of them a *source*. What then are the several *sources* from which, for any purpose, and in particular for purposes of practical utility, it is producible, and accordingly produced? More shortly, what are the several *sources of motion*, and what the corresponding *prime movers*, or *primum mobiles*? Of a search, made in the latest and most approved institutional works on Natural Philosophy, the result has been—that of no such topic is any the slightest mention to be found: and thus *a gap*, the existence of which had long been matter of observation, and never without astonishment—a gap in the very heart of the science—was found to remain still unfilled up.

That, in the Chrestomathic School, a demand so urgent may not be altogether unprovided with an answer, a slight sketch on this subject has been attempted, and is inserted in the *Appendix*:—in the hope, and under the assurance, that, being thus started, the subject will not remain long without being more effectually pursued by more competent hands.

(45.) [*Hydrostatics.*] From two Greek words: one of which signifies *water*; the other, taking a *station*, *position*, or *level*.

To this head belong such of the *mechanical* properties of the portions of matter of which our earth is composed, as are the result of the propensity which, in conformity to the all-pervading principle of *gravitation*, the component particles of water, and all other bodies, in so far as they are in a state of *fluidity*, have to range themselves in such a manner as to form a surface, which to our eye appears *flat*, but which is in fact a *curve*, having its central point in this our planet.

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On this property depend the means employed for ascertaining the *specific gravity* of different bodies: i. e. the *different weights* respectively possessed by the *same bulk* of each; and in particular the *weights*, and thence the *values*, of *spirituous* and other costly liquors: so likewise, in a considerable degree, the effects of *pump-work*; of *mill-work*, more particularly in the case of *water-mills*; and the efficiency of such solid constructions as are employed in resisting the *pressure* of the *water*: for example, navigable vessels, wharfs, docks, &c.

(46.) [*Hydraulics.*] From two Greek words: one of which, as above, signifies *water*; the other, a *pipe* or *tube*.

To this head belong the *mechanical* properties of liquids, as above,—in so far as, being bounded by and confined in solid channels of a determinate form, the *force* with which, and the *direction* in which, when put in motion, they act, and the *effects* of which, on that occasion, they become productive, are influenced by the internal *form* or *configuration*, of those same channels. It is therefore nothing but a particular branch or modification of *Hydrostatics*. To this belongs, for example, *pump-work*, as above, and in general the art of *conveying* water and other liquids, upon a large scale, to places in which they are wanted.

(47.) [*Mechanical Pneumatics.*] *Pneumatics*, from a Greek word, which means *air*. Coincident with, or at least included in, the import of this term, is that of the recently employed term, *Aërostatics*.

To this head belong those *mechanical* properties, as they are termed, which, in whatsoever different degrees, are possessed in common by all such portions of matter as, at the time in question, are in the *aërial* or *gaseous* state: and in particular their *weight* (the result of the *attraction* of *gravity*,) their *elasticity* (the result of the principle of *intestine repulsion*,) and that *pressure* on all sides which is the result of the sort of *compromise* that has place amongst those *antagonizing forces*.

To the head of *Chemical Pneumatics*, as below, belong those properties by which the several species of bodies, when in the *gaseous* state, are distinguished from each other.

On the above *mechanical* properties depend, for example, in a greater or less degree, the art of *mill-work*, in so far as concerns *windmills*; the art of constructing and navigating *navigable vessels*, in so far as *sails* are employed, and in virtue of the tendency which the same body, viz. *water*, has to pass from the *liquid* into the *gaseous* state, and back again, according to the quantity of *heat* combined or mixed with it, the construction of *Steam-Engines*.

(48.) [*Acoustics.*] From a Greek word, which signifies *to hear*. To this head belongs the property which, by its motion, *air* has, of producing in the correspondent organs of man and other animals, the perception of *sound*, in the infinitely diversified modifications of which it is susceptible. On the science thus denominated depend, for example, in a degree more or less considerable, the art by which relief is afforded in case of *deafness*; and the art by which *words* and other *audible* signs are employed in the *communication* of ideas, whether near at hand or at a distance.

(49.) [*Optics.*] From a Greek word, which signifies *to see*.

To this head belongs the property which *light* has, of producing in the correspondent organs of man and other animals, the perception of *sight* or *vision*: and thereby rendering in some sort present to them bodies, which, so far as depends upon all other senses, are separated from them by vast, untraversable, and even unmeasurable distances.

On this depends, for example, the art of employing with effect *glasses* and other bodies, so prepared as, in some cases, to *transmit* the light, in others, to *reflect* it; and by the one means or the other (besides increasing, for the purpose of *chemical* operations, the quantity of *light*, and along with it of *heat*, brought to bear upon a given point,) to *delight* the organs of vision by a variety of *images*, not otherwise perceptible; to afford *relief* to those same organs under various *imperfections* to which they are subject; to enable them to obtain perception of objects too *small* to be perceived otherwise, and of others (such as several of the heavenly bodies,) which, notwithstanding their vast bulk, are too *distant* to be by any other means effectually perceived or observed; and, by observations taken of them, to ascertain, upon occasion, with relation to the general surface of the earth, by the help of calculation, the momentary position of a *navigable vessel*, and thus afford *guidance* to it in its course.

(50.) [*Chemistry.*] From an Arabic word, which may be said to be of the same signification, allowance made for the minuteness of the stock of knowledge, possessed in relation to the subject, at the time when the word first came into use, in comparison with the vastness of the stock possessed at present.

To the head of *Chemistry* seem to be generally referred, those properties, which are either discovered in bodies, or given to them, by means of *mixture* (i. e. actual contact, produced as between bodies in a *fluid* state on the one hand, and bodies, either in a *fluid* or in a *solid* state, on the other,) or by the application of extraordinary degrees of *temperature*, (i. e. of heat or cold, or both;) on which occasions the original bodies are, commonly, in appearance destroyed; and, in the room of them, new ones, in appearance and properties more or less dissimilar, produced.

(51.) [*Mineral Chemistry.*] (52.) [*Vegetable Chemistry.*] (53.) [*Animal Chemistry.*] i. e. Chemistry considered in its application to those three different classes of bodies. Applied to mineral bodies, it is capable of producing not only the effect of *composition*, as well as that of *decomposition*, but, in many instances, that of *recomposition*: *i. e.* by putting together

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bodies, such as they are in their *natural* state, it produces *new* ones;—bodies possessed of properties never before made manifest. By *decomposing*, *i. e.* resolving into their respective constituent elements, bodies such as they are in their natural state, it *thus* also produces *new* ones; and moreover, after thus resolving a body into its constituent elements, it, in many instances, is able to put them together again, in such a manner as to reproduce the very body so decomposed: a body composed of the same elements, and not, in respect of any of its properties, distinguishable from it. Applied to *vegetable* or *animal* bodies, its powers are confined to *decomposition:* neither to *composition* nor *recomposition* do they extend. Of these *organized* bodies, the formation is a process by much too secret and refined, to be copied by human art.

In the course of the instruction given in *Chemistry*, as it comes to be applied respectively to the subjects of the *mineral*, *vegetable*, and *animal* kingdoms, occasion will occur for recalling, enlivening, extending, and fixing in the memory, the information received in relation to them, in Stage I.

(54.) [*Meteorology.*] From two Greek words, the first of which signifies *aloft* or *elevated*. No sooner does a substance break free from any of those bonds, by which, while remaining in a state of *solidity* or *liquidity*, it has been confined to a determinate part of the earth's surface, than it enters into the province of *Meteorology*, and there continues, until, by any of those revolutions of which the *atmosphere** is the constant theatre, it is again brought into immediate contact with, and made to form a portion of, some one or more of those solid or liquid masses. Thus, after having been raised, by *solution* in the incumbent air, and then again *precipitated*, water, on its descent towards the dense part of the earth's surface, becomes, according to circumstances, *mist*, *rain*, *hail*, or *snow*;—remaining all the while, and until it has reached that dense part, amongst the subjects of meteorology. So likewise the *electric fluid*, when, by the magnitude of its quantity, it gives birth to those appearances, which, under the denominations of *thunder* and *lightning*, are sometimes so fatal, and, to many a timorous mind, at all times so tremendous.

(55.) [*Magnetism.*] From a Greek word, which signifies *a loadstone:* this naturally compounded species of mineral, having *iron* for its principal element, being the only body, in which the peculiar relation, in the way of attraction and repulsion, to other bodies of the same sort, or to *iron*, was for a long time observed:—though latterly, by human art, means have been found, for establishing the same sort of relation between one piece of iron, prepared in a particular manner, and another; and still more recently, between *magnets* or magnetized iron, on the one part, and, on the other, a newly discovered species of metal, called *nickel*, the like relation has been observed.

A piece of iron, when brought to a proper form, and, after having, for the purpose, been *magnetized*, as above, left free to turn itself upon a centre, points towards a star which serves for giving name to the *north*, and thence to the other divisions of the universe, and to the corresponding points of the *mariner's compass:* by which means, without view of sun, moon, or star, the situation of the spot, at which the observation is made, with relation to every part of the universe, is at all times ascertainable. And thus it is, that, for showing to him the *direction* in which he is moving, the magnetic needle is become an instrument, as necessary as it is simple, in the hands of the navigator.

(56.) [*Electricity.*] From a Greek word, which signifies *amber*. By mere rubbing, certain kinds of bodies had, at different times, been found capable of being rendered productive of extraordinary appearances, and extraordinary changes, in other bodies: *attracting* them, *repelling* them, producing *light*, producing *heat*, and so forth. Of the sorts of bodies, by means of which these appearances are producible, *amber* having been the first, in which the power of producing them was observed, hence the whole system of those effects came to be designated by the name of *electricity;* as if one should say, *amber-work*.

By degrees, it having been observed that the property of producing those effects, is a property, which, under certain circumstances, is manifested by *all* matter, it was at length discovered, (viz. by *Benjamin Franklin,*) that, among them are those, to which, when manifested upon the largest scale, the names *thunder* and *lightning* are applied.

Accordingly, to this head belong, at present, the means employed for securing person and property, from the destruction of which those changes in the atmosphere are liable to become the source.

In some diseases, *electricity* has been applied, not altogether without success, in the character of a remedy.

(57.) [*Galvanism.*] From *Galvani*, an Italian, by whom, not long before the close of the last century, effects, in many respects coinciding with, though in some respects different from, those produced by *electricity*, were found producible, without the help of friction or intercourse with the clouds, by a mere arrangement, made to take place between certain bodies in a solid, and certain others in a fluid state.

Magnetism, *Electricity*, *Galvanism*—in the hands of the chemist, the powers designated by those several names, more particularly *Electricity* and *Galvanism*, have become so

* The *atmosphere*, i. e. the miscellaneous mass of matter in a gaseous state, with which those parts of the earth's surface, which are in a *solid* or *liquid* state, are constantly encompassed.

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many very efficient and active instruments: by *Electricity*, but still more particularly by *Galvanism*, bodies, which till then had been regarded as simple, having, principally under the management of *Sir Humphrey Davy*, been decomposed, and new ones, possessed of very extraordinary properties, brought, as it were, into existence.

By Magnetism, by Electricity, and in some degree by Galvanism, effects have thus been produced on other bodies, without any remarkable *change* in the *constitution* of the bodies employed as instruments in the production of those effects: and in this way it is, that these districts of the field of science appertain, in some respects, to the province of *Mechanics*. But, by the use and application made of them, particularly of *Electricity*, and most particularly of *Galvanism*, not only new properties have been observed, but prodigious *changes* have been made, in the *constitution* of most sorts of bodies: and in this way it is that they appertain to the province of *Chemistry*.

(58.) [*Balistics.*] From a Greek word, which signifies to *cast*: called also the theory of *projectiles*, from a Latin word of the same signification. The mass projected is either in a *solid* or in a liquid state: in so far as it is in a *solid* state, the art of *Gunnery* is included in it: an art, which, in so far as concerns the *motion* produced, belongs, since the invention of gunpowder, to *Chemistry*; and in so far as concerns the giving *direction* to that motion, to *Mechanics*. In so far as the mass projected is in a liquid state, the art is that of making *Jets d'eau*, i. e. *playing fountains*: a branch which, by its perfect innocence and comparative insignificance, forms a striking contrast with the other.

In detail, neither can *Gunnery*, any more than *Fortification*, or *Navigation*, present any sufficient title to admittance into the *Chrestomathic* school: but, in so far as they are, all of them, comprehended in *Natural Philosophy*, it would be leaving an incongruous gap, not to give some general intimation of the general principles on which they respectively depend.

(59.) [*Geography continued.*] In the first Stage, the instruction relating to Geography will have been confined to mere *Topography*:—the knowledge of the divisions and remarkable spots, partly natural, partly factitious, observable on the earth's surface: beginning, of course, with the country in which the instruction is administered. At this next, and other succeeding stages, the same ground will be retrodden: and in it, as relative capacity advances, information will be afforded, of that sort, which, in books of *Geography*, used to be comprehended under that name, but of late years has been referred to a separate name, viz. *Statistics*: such as that which concerns *population*; the manner and proportions in which the matter of *wealth*, the matter of *power*, and the matter of *dignity*, are distributed; quantity and quality of *military force*, &c. &c.

(60.) [*Geometry continued.*] See *Stage I.*

(61.) [*Historical Chronology continued.*] In the same manner as *Geography*, presented at first in the state of a *naked* field, receives by degrees its proper *clothing*, so will *Historical Chronology*. In the one case, as in the other, the signs will come to be repeated: and, at each repetition, an additional quantity of information will be superadded.

To the account of the great military wars and other political events, composed of battles, sieges, unions and dismemberments, acquisitions and losses of territory, changes in dynasties, and in so far as in the *Stage* and at the *age* in question, they can be made intelligible, in *forms* of *government*—to this will by degrees be added, the sort of information, designated by the term *Archæology*, i. e. *account of antiquities*: an account of the state of *persons* and *things*, in *anterior*, i. e. *former* and *earlier*, so preposterously termed *ancient*, times; including information respecting lodging, diet, clothing, military equipment, pastimes,—powers and functions—belonging to *offices*, civil, political, and religious, &c.

(62.) [*Appropriate Drawing.*] In the Chrestomathic school, the great use of *drawing* is, the giving *assistance* to, and serving as a *test*, and thence as a *cause* of, *proficiency* in the branches of *art* and *science* to which it is applicable. On this score, in so far as it is *appropriate*, it will adapt itself to those several subjects, in proportion as they are presented. But this direction receives a necessary modification, from the state of the *bodily organs* in question in respect of maturity.

(63.) [*Grammatical Exercises.*] See Table II. The objects aimed at in and by these exercises will be—

1. To render the scholar acquainted with the *structure* of language in general, and that of his *own* language in particular; and thereby, to qualify him for speaking and writing, on all subjects and occasions, with clearness, correctness, and due effect—in his own language.

2. By familiarizing him with the greater part, in number and importance, of those terms belonging to *foreign* languages, from which those belonging to his *own* are derived, and in which the origin of their import, and the *families* of words with which they are connected, are to be found—to divest them of that repulsive and disheartening quality, of which so impressive an idea is conveyed, by the appellation of *hard words*.

3. To render the approach, to the several branches of art and science, as *smooth* and *easy* as possible, by rendering that part of the language which is peculiar to them, and which is mostly derived from *foreign*, and in particular from the *dead* languages, as *familiar* as any other part.

4. To lay a substantial and extensive foundation, for a more particular acquaintance, to

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the purpose of *reading*, with or without that of *conversation*, with the several foreign languages, *dead* and *living*, comprehended in the scheme, or such of them as, at a maturer age, shall be regarded as promising to be conducive to the scholar's *advancement* in life, or agreeable to his *taste*.

As to the *subjects* of these exercises, in addition to the *rules* of *Grammar*, they may consist of select portions of *History* and *Biography*, taken from the most approved works composed in the several languages.

In any language other than his own, *composition*—except in so far as *Translation* (see Tab. II. *Exercises*) or *Note taking* (see Stage V. 13.) may be considered as coming under this head—is proposed not to be comprehended in this course, but to be reserved to some other *seat* of instruction, or for *self-instruction* at a maturer *age*.

(64.) [Stage III.] At this Stage, the general information, obtained in the two preceding stages, is still repeated; and the application made of it to the exigencies and gratifications of common life, rendered more and more particular and determinate, and brought still nearer to actual and common use.

(65.) [*Mining*.] Under *Mineral Chemistry*, have been brought to view, the different sorts of *simple* substances obtained by means of this *art*, together with the *new* substances, obtained by putting them together, and *combining* them, in groups and proportions, different from those in which they are found combined by the hands of *Nature*. Under the present head, a general view (and a very general one will suffice) will be to be given, of the manner in which this art is practised. In its quality of an *art*, operating upon *materials*, rendered more or less known by precedent *science*, it matches in some sort with *Architecture* and *Husbandry*, to which it supplies a considerable part of the *materials*, which they respectively employ.

(66.) [*Geognosy*.] From two Greek words, one of which signifies the *earth*; the other, *knowledge* or *understanding*. By this name is designated what we have as yet been able to learn, concerning the manner in which the matters composing the substance of the earth, including so much of what is underneath the surface as hath been rendered accessible to us, are distributed. By *Geography*, the earth is viewed in one *direction*; by *Geognosy* in *another* direction: by *Geography*, it is considered with a view to one *set of purposes*: by *Geognosy*, with a view to *another* set of purposes. *Geognosy* is among the new fruits of *Chemistry*. To the general gratification afforded to *speculative* curiosity, *Geognosy* adds the *practical* advantage, of affording indications—presumptive and experiment-saving indications—of the presence or absence of the valuable substances, for the extraction of which the *art of mining* is employed.

By the *remains* which it brings to light of the *dead* subjects, of the *vegetable* and *animal* kingdoms—some of them known, others not known, at present in a living state—*Geognosy* includes *Archæology*, as applied to the *structure* of this our Globe.—(See Stage II. 17.)

(67.) [*Land-surveying*.] In an application made of it at Stage II. to *Mechanics*, *Geometry* found *one* of its practical uses: in its application to *Land-surveying*, it will find another. In addition to the more elementary part, *Trigonometry* (from two Greek words, one of which signifies *a three cornered figure*, the other *measuring*) is a branch of the speculative science called *Geometry*, which on this occasion will be brought into *practical* use. But in *this* instance too, as well as in that of *Mechanics*, the *simply enunciative* parts of the *propositions* will serve by themselves; still leaving to a more advanced stage such instruction, and such *exercises*, as take for their subject the *demonstrative* parts.

(68.) [*Architecture*.] From two Greek words, one of which signifies *chief* or *principal*; the other, *Handicraft work*.

For its *products*, and in that view its *subjects*, *Architecture* in general has *constructions* in general. *Constructions* may be distinguished into *principal* constructions, *i. e.* constructions of independent use, and constructions for the purpose of *communication*. Principal constructions are mostly *receptacles*. According to the nature of the *bases* on which the receptacles *rest* or *move*, they are distinguished into *terrestrial*, *aquatic*, and *aërial*: fixed buildings, navigable vessels, and air balloons.

Of *communication*, the principal instruments are, 1. Roads. 2. Canals, including *tunnels* and *drains*. 3. Quays, including *Wharfs* and *Jetties*. 4. Bridges.

Substituted to the present costly and comparatively useless stock of a *toy-shop*, *architectural* models of buildings and furniture, might, if made to take to pieces and put together again, be to this purpose productive of real and lasting use.

(69.) [*Husbandry*, including *Theory of Vegetation* and *Gardening*.] On this occasion, application will come to be made of the instruction obtained in relation to the *mineral* as well as the *vegetable* system, in Stage I.; and in relation to *Vegetable Chemistry*, in Stage II. So of the instruction obtained in relation to *Architecture*, in so far as concerns barns, drains, and other *constructions*; and in relation to *Husbandry* itself, in so far as concerns *implements*—employed, or with advantage employable, in Husbandry. How to convey and commit to the *earth* to the best advantage the *seeds* and *other germs* of its *products*,—as well as how to collect and convey to the *store* or the *market* the products themselves when ripe, or otherwise ready for use;—so likewise how to collect, convey, and commit to the earth the *manure* employed in their production—will be learnt principally from *Mechanics*: how to preserve them against corruption and combustion,—as well as how to choose, prepare, and keep the

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manure—from *Chemistry*. So in *Gardening*, how to employ artificial heat and shelter in the improvement or preservation of those choicer vegetables which are the subject of that art. *Cattle*, not to speak of *Bees*, are all of them among the *fruits*, some of them among the *instruments*, of Husbandry. For what concerns the care of their *health*, reference will be to be made to Stage IV. Among the inferior animals, *Husbandry* has a multitude of *enemies*. For the most effectual modes of destroying them, reference will be to be made to Stage IV. But to this purpose it may be necessary to obtain more or less knowledge in relation to them: and for this knowledge the *foundation* will at least have been laid in Stage I.

(70.) [*Physical Economics.*] *Physical*, from a Greek word which signifies *Natural*, in contradistinction to *moral*:—*Economics*, from two Greek words: one of which signifies *a house*; the other, *management*. Of *Mechanics* and *Chemistry*,—partly in an immediate way, partly through the medium of *Architecture* and *Husbandry*,—of Mechanics as well as Chemistry, but principally of Chemistry,—application will here be made to all the various *physical* concerns of a *family*: *care* of *health* excepted, for which see Stage IV.

From Chemistry, more particularly, will be deduced and administered an all-comprehensive stock of practically useful information. *Maximization* of bodily *comfort* in all its shapes—*minimization* of bodily *discomfort* in all its shapes—*minimization* of the *labour* and *expense* applied to both these intimately connected purposes—these will the art in question have for its *ends* in view. [For *maximization* and *minimization* see Table II. *Principles.*] Articles of household *furniture*, *apparel*, *food*, *drink*, and *fuel*, these it will have among its principal *subject matters*: *warming*, *cooling*, *moistening*, *washing*, *drying*, *ventilating*, *lighting*, *clothing*, *cooking*, *preserving*, *repairing*, *restoring*—these it will have among its principal *operations*: *air*, *heat*, *cold*, *light*—substances, some in a *solid*, some in a *liquid*, some even in a *gaseous* form,—substances, indefinitely diversified in *form* and *texture*,—substances, from all three *kingdoms*, mineral, animal, and vegetable,—some natural, some factitious—some simple, some compounded,—these it will have for its *materials* and *instruments*.

(71.) [*Hygiastics* or *Hygiantics.*] From a Greek word, which signifies appertaining to *health*:—the branches of art and science which appertain to health; i. e. to the *preservation* as well as *restoration* of it.—*Medicine*, *Physic*—the words most commonly employed on this occasion—are inadequate and delusive. Under the name of *Medicines* or *Physic*, drugs are conceived as being to be conveyed into the stomach; and, to the choosing and preparing of these *drugs*, the idea of this most extensive and diversified cluster of arts and sciences is thus confined.

Of all the *bodies*, which it can be the object of this or any other course of instruction, to render the scholar more or less acquainted with,—there is not one, the state and condition of which can be of near so much importance to him as that of his *own*. At this time of life, few, it is true, in comparison, are the instances, in which the body is in any way constantly out of order: not a few, in which it scarce ever is. Partly to this cause it seems to be owing, that, in the education of youth, so important a branch of instruction has experienced so general a neglect. Several others however have likewise been contributing their share towards the production of this effect. At the time or times, in which the plan of *School* education (not to speak of *University* education) received its form, *Chemistry*—one of the necessary bases of *Hygiantics*—had no existence: and of the nine other arts and sciences, which, as below, may be stated as being subservient to it, several were nearly in the same case. In those days, the art not having any clear foundations, there was scarcely anything which—especially to a mind of the age of a school-boy's—was capable of being taught.

Very different is the case at present. When, by instruction in the several branches herein enumerated, a clear *foundation* has been laid—as in a moderate space of time it may now be laid—a few *rules* may, at a still more moderate expense of time and words, be taught and learnt to great advantage. How to guard against *disease* and *death*, considered as liable to be produced, by suddenness or excess of *heat*, *cold*, or *moisture*, by *want* of respirable *air*, by excess in *diet* or bodily *labour*: how to apply to one's self, or to obtain from friendly ignorance, the speediest as well as most effectual relief—in the case of those accidents, in which the most common disorders take their rise: a *burn*, a *scald*, a *flesh wound*, *lameness* produced by *corns*; *indigestion* in its various symptoms, pains of the *rheumatic* kind in the head tooth or ear, what is called a *cold*, in the several shapes in which that malady is most apt to make its appearance; how to operate towards the recovery of persons apparently *drowned*: in *serious* cases in general, what to do in the meantime, until *professional* assistance can be obtained; and when obtained, how to form some judgment as to its competency. To *females*, partly on account of the infirmities peculiar to that sex, partly on account of the almost exclusive share which they possess in the management of children of both sexes for several years after birth; this branch of knowledge is, in a more peculiar degree, important. In point of fact, all *Mothers*, all *Nurses*, are *Physicians*. Partly by remedies altogether unapt, partly by ill applied ones, partly by ill grounded and false theories—in uninstructed families, especially in those in which the expense of professional advice is an object of alarm, it may almost be a question—whether more mischief is not done by medicine, than sustained for want of it.

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Children, in particular, are not unfrequently enslaved and tormented by unnecessary precautions and groundless fears. Great would be the value of sound *hygiantic* instruction, were it only in the character of a preservative against the certain mischief to the purse, and not improbable mischief to the constitution, by *quack medicines;* medicines of unknown composition, presented by those to whom the patient, and with him the particular nature of his case, is unknown. Various are the impositions of which the human body is liable to be made the subject: by a moderate quantity of *hygiantic* instruction, such as the course in question could not fail to afford, the mind is rendered proof against them all. It would have its use, were it only to enable a patient to make, to his professional adviser, a correct, complete, and conclusive report of his own case.

(72.) [*Physiology.*] From two Greek words, one of which signifies *nature* or natural state; the other, *an account;* an account of the several component parts of the body, as well those which are naturally in a liquid, as those which are in a solid state.

(73.) [*Anatomy.*] From a Greek word, which signifies *dissection, cutting up.* The parts of the body, to which it can apply, are of course no other than those which it finds in a *solid* state.

(74.) [*Pathology.*] From two Greek words, the first of which signifies *sensation:* an account of the *sensations* which the human frame is liable to experience, more particularly the *painful* or uneasy ones.

(75.) [*Nosology.*] From two Greek words, the first of which signifies a *malady, disease,* or *disorder:* an account of the several maladies, diseases, or disorders, which the human frame is liable to experience.

(76.) [*Dietetics.*] From a Greek word which signifies *habitual mode of life,* more particularly in respect of *food* and *drink;* whence the English word *diet:*—the knowledge of what appertains to *diet;*—of the influence which, as well in other respects as in respect of *nourishment,* substances, commonly taken into the stomach, have on the state of the animal frame.

(77.) [*Materia Medica.*] Two Latin words, which signify the *matter* of which *medicines* (substances applied to the stomach or other parts of the body, for the cure or prevention of disorders) are composed.

(78.) [*Prophylactics.*] From a Greek word, which signifies *measures of precaution.*

(79.) [*Therapeutics.*] From a Greek word, which signifies to *cure* or *endeavour to cure,* a disorder.

(80.) [*Surgery, or Mechanical Therapeutics.*] *Surgery,* from two Greek words: one of which signifies a *hand,* the other *operation.* *Mechanical* Therapeutics it may be called, because in so far as, in the endeavour to cure or relieve a disorder, the hand of an operator is considered as being employed,—the *means* employed belong to the *mechanical,* in contradistinction to the *chemical,* walk in the field of art and science.

(81.) [*Zoohygiantics* or *Zohygiantics.*] From two Greek words: one of which, as above, signifies an *animal;* the other, as above, *pertaining* to the care of *health:*—the arts of preserving and restoring health, considered as applied to the *inferior* animals; viz. to such of them in the health of which man is, on any account, wont to take an interest. Branches of art and science—viz. branches *condivident* or *subservient*—*hygiantics* thus applied, has, of course, the same, in quality and number, as when applied to the human species, as above.

Applied to the inferior animals, *Anatomy* is in use to be styled *Comparative Anatomy.* With equal propriety the term *comparative* might, it is evident, be applied to the eight other branches above enumerated.

For answering (which it does, however, but in part,) the purpose of the above word *Zohygiantics,* the only word as yet in use is—the *Veterinary Art:* whence the *Veterinary Surgeon* takes his name. *Veterinary* is from a Latin word, which signifies *to carry.* Of all the inferior animals, in the health of which it may happen to man to take an interest, the only ones to which this appellative applies are, therefore, the very few which come under the denomination of *beasts of burthen.* By its literal analogy to the word *veteran,* derived from the Latin word which signifies *old,* it has moreover the inconvenience, of presenting some such idea as that of the *Old Man's* or *Old Woman's art,* more readily than the branch of art which it is employed to designate.

(82.) [*Phthisozoics.*] From two Greek words: one of which signifies to *destroy;* the other, *an animal,* as above:—the art of destroying such of the inferior animals as, in the character of natural *enemies,* threaten destruction or damage,—to himself, or to such animals from which in the character of natural *servants* or *allies,* it is in man's power to extract useful service,—is an art, not much less necessary, than that of preserving and restoring to health, those his natural *friends.*

Animals which, either immediately or mediately, as above, are regarded as noxious to man, are commonly included under the general appellation of *vermin.* *The Complete Vermin-Killer* is the title of an old established book.

(83.) [*Mathematics.*] From a Greek word, which signifies *learning in general;* so inapposite and uncharacteristic, is the only word, as yet employed for giving expression to this branch of art and science.

(84.) [*Geometry.*] (85.) [*Arithmetic.*] See Stage I.

(86.) [*Algebra.*] From an *Arabic* word, the signification of which seems not to be exactly known.

By *Geometry, quantity* is considered with

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relation to *form*, *shape*—or, as on this occasion it is more common to say, *to figure*;—by *Arithmetic* and *Algebra*, *without* relation *to figure*. In so far as *figure* is out of the question, *number* is the only form, in which *quantity* is susceptible of diversification. In so far as the number in question is represented by the appropriate characters, called *cyphers*, but more commonly *figures*,* the amount of it is thus, in a *direct* way, made known; and *Arithmetic* is the name employed in speaking of it: in so far as it is no otherwise expressed, than by means of some *relation*, more or less complicated and disguised, which it bears to some known number or numbers, *Algebra* is the name employed in speaking of it. For giving expression to such numbers as are yet *unknown*—(all numbers in so far as they are respectively expressed by one simple line of the appropriate characters being *known*)—instead of *figures*, other signs (such as certain *letters* belonging to the Alphabet, and commonly taken from the *close* of it) are employed. This is for *shortness*: thus, instead of saying (i. e. writing) *first unknown number*, the Algebraist says x; instead of *second* unknown number, y; and so, for a *third* z. And from time to time, for further abbreviation, other letters again, taken from the *commencement*, or some other *anterior* portion of the Alphabet, are commonly employed. For *addition*, *subtraction*, *multiplication*, *division*, *equality*, and certain other terms of arithmetic, the shorter signs (+ − × ÷ =, &c.) being also employed, *Algebra* is thus, in respect of the *signs* employed in it, a species of *short-hand*:—of *short-hand*, applied to the particular subject of *quantity*, considered without reference to *quality*.

Can it be then (it will naturally be asked) such wonders as have been performed by Algebra—can it be, that it is by mere *abbreviation*—by nothing but a particular species of *short-hand*—that they have been performed? by the mere use of a set of *signs* or *characters*—by which the ideas in question are expressed in a less quantity of *space* and *time*, than would have been necessary, to the giving expression to them by the *signs* or *characters*, of which *ordinary written* language is composed, and by which those sounds are designated, of which the ordinary *spoken* language is composed?—Newton, Leibnitz, Euler, La Place, La Grange, &c. &c.—on this magnificent portion of the field of science, have they been nothing more than so many expert *short-hand writers*?

Answer.—Assuredly, the system of *abbreviated forms of expression* is one thing—the *purpose* to which these modes of expression are employed is another and perfectly distinguishable thing. The purpose, to which, in the instance in question, this species of *short-hand* is applied, comes, in every instance, within the description given above, viz. *by means of their relation to certain quantities that are known, the making known a certain quantity or certain quantities, which, in all other respects, are as yet unknown.*

But, for making out this relation, some contrivance in every instance—and, in some instances, abundance of very subtle contrivance—over and above the use of *short-hand* is, or at any rate originally was, necessary: and from the *short-hand* itself, the system, composed of these *contrivances*, is in itself no less distinct, than any one of the species of discourse (a *speech*, for instance, or the *evidence* of a *witness*,) which *short-hand*, commonly so called, is employed in giving expression to, is distinct from the *short-hand*—the *mode of writing*—itself.

In that No. of the Appendix, in which an exposition is given, of some ulterior *principles of instruction*, by means of which the characteristic principles of the new system may (it is supposed) be applied to *Mathematics*—and *that* with as much facility and advantage, as any with which they are or can be applied to, *Reading*, *Arithmetic*, or *Grammar*—this subject will be resumed.* In the meantime two observations may have their use.

1. The first is, that, though the *Algebraic* contrivances—the contrivances by which the algebraic *short-hand* is to the purpose in question made use of, are perfectly distinct from the *short-hand* itself; yet so prodigious is the facility which, when the *short-hand* has once been learnt, is afforded by it, that what seems probable is—that, had it not been for the *short-hand*, a very small part of those algebraic *contrivances*, which at present are in use, would at this time, if ever, have been discovered. Compared with the words, by which the same ideas are expressed in ordinary language, the *Roman numerals* are a species of short-hand: compared with these *Roman* numerals, the *Arabian* numerals, now mostly substituted to them, are a highly-improved species of short-hand—a species by which alone, independently of the *Algebraic* short-hand, much greater progress would probably have been made in Mathematics, than, in the same quantity of time, would have been made with no other instrument of abbreviation than that which is composed of the Roman numerals.

2. The other observation is, that, whether without the *short-hand*, the *contrivances* would or would not have as yet been hit upon; yet, now that they have been hit upon, being, as above, in the nature of the case, so perfectly distinct from the *short-hand*, there is nothing to prevent their being expressed without it—expressed by the words of which ordinary language is composed—no more than there is, to prevent from being written down in words at length, and so printed, a mass of *evidence*, which at a trial has been taken down in *short-*

* The use thus made of the word *figure*, in two senses thus different, and yet not so different as not to be liable to be confounded, is an unfortunate circumstance; but such is the state of the language.

* See Appendix, No. VIII.

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hand; and which, but for the *short-hand*, could not have been taken down, unless a greater length of time had been allowed for the delivering of the evidence.

Hence comes the practical conclusion, viz. that, for the convenience of learners, it would probably be of no small use, if, in ordinary language—language clear from those *characters* and *formularies*, so appalling to every as yet uninitiated, (and more particularly to the uninitiated juvenile eye)—explanations were given of the several *contrivances* in question; or if, in this way, the explanation of the whole system, pursued to the length to which it has already been carried, would occupy too much space—at any rate, of such points, as, by the joint considerations of *facility* and *utility*—*facility* in *acquisition*, and *utility* in *application*—should be found recommended for preference.

(87.) [*Uranological Geography.*] *Uranological* from *Uranology*, which is from two Greek words: one of which signifies the *heavens;* the other, as above, *an account:*—an account of the heavenly bodies—more commonly termed *astronomy:*—*Astronomy*, from two Greek words: one of which signifies a *star* or *planet;* the other, *arrangement*, or to *arrange*. But in this field, the *space*, in which the bodies are considered as being in a state of *motion*, or in a state of *rest*, requires to be considered; as well as the *bodies*, which are considered as *moving* or *resting* in that *space:* and as for *the bodies*, it is not by him who is called an *astronomer*, that the *arrangement* made of them has been made. (See Stage I., and see the next article.)

(88.) [*Uranological Chronology.*] See Stage I. When that *fixation of quantities*, which is not performable but by mathematical investigation, is discarded or postponed, a very small quantity of time will suffice, for conveying a *general*, yet sufficiently instructive intimation, of what is ascertainable, in relation to such parts of the contents of the universe, as are in any way open to our observation. But if this quantity, small as it is, be grudged, it is only in virtue of its application to *Geography* and *Chronology*, that *Uranology* can present any very decided claim to admission into the *Chrestomathic* course. In Stage I. *Geography* and *Chronology* were considered in the most simple and obvious point of view; and accordingly, without reference to those relations between the *Earth* and the other celestial bodies (principally our *Sun* and *Moon*,) on which the facts belonging to these branches of science are so essentially dependent. In regard to *Uranological Geography* and *Uranological Chronology*—the practical uses, to which these two branches of *Uranology* are applied, being different—distinct names are accordingly required, for giving *expression* to them; but, considered as *subjects of instruction*, the consideration of them is inseparable. To *Uranological Geography* more particularly, belongs the division made of *space*, on the Earth's *surface;* viz. the division into *climates*, and degrees of *latitude* and *longitude:* and the influence exercised by the *Moon* on the *tides;* i. e. on the motions of such parts of the earth's surface as are in a *liquid* state; perhaps also in the *winds*, i. e. on the motions of such parts as are in a *gaseous* state. To *Uranological Chronology* more particularly, belong the divisions made of *time:* viz. the natural divisions into *periods, cycles, solar years, months, lunar years*, and *days;* together with the ulterior factitious and arbitrary, but not the less necessary, divisions into *hours, minutes*, and *seconds*.

Place and *time* being considered together, and with reference to each other, the heavenly bodies, employed as they are in the measurement of both these quantities, serve for the indication and guidance of the course of a ship at sea: and thus they are, as it were, taken up, and, in conjunction with the *magnetic needle*, employed as *instruments*, in the hands of the *Navigator*. On this occasion, by means of our organs of sight, *light* becomes a sort of instrument of *communication*, and thence of *measurement*, between this our planet and other component parts of the material universe, and, not only between those comparatively near orbs, on which the motions of our own have a perceptible dependence, and correspondent reciprocal influence; but between our own and others, such as the *Moons*, (called *Satellites of Jupiter*,) the star called *the Polar Star*, and the other stars, which, for the purpose of distinguishing them from *Planets*, are called *Fixed Stars*—the *motions* of which have for their place, a field, separated from that of our own planet, by distances, more and more extensive, till at last they stretch to such a pitch, as to bid defiance to all calculation:—the *motions;*—for it appears not that even the Stars called *fixt*, are exempt from that law of universal gravitation, of which perpetual as well as universal *motion* is the necessary consequence.

The short time necessary to a general acquaintance with *Uranology*, would not be altogether uselessly employed—would not be *unchrestomathically* employed—had it no other use than that of preserving the mind against the alarming and predatory delusions, set to work by the species of impostor called an *Astrologer*.*

(89.) [*Technology.*] From two Greek words: the first of which signifies an *art*. In the list of separately administered branches of instruction, this article may serve to close the last Stage. On this occasion, as far as time will

* Under the title of Sibley's Astrology, a work has been seen, containing no fewer than four thick 4to volumes, of very recent date. A work of such expense could never have been published, but under the assurance of a considerable number of purchasers, all of whom must necessarily have been found in the most opulent and extensively educated classes.

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admit, a *connected* view is proposed to be given, of the *operations* by which *arts* and *manufactures* are carried on. The more *general* information, obtained, in Stages II. and III., in relation to *Mechanics*, and *Chemistry*, and some of their dependencies, will thus be extended farther on in the region of *particulars*. On this occasion will be to be shown and exemplified, the advantages, of which, in respect of *despatch* and *perfection*, the principle *of the division of labour* is productive.

Here will be shown how, by the help of this most efficient principle, as *art* and *science* are continually making advances at the expense of *ordinary practice* and *ordinary knowledge*, so *manufacture* (if by this term may be distinctively designated *art*, carried on with the help of *the division of labour*, and thence *upon a large scale*) is continually extending its conquests, in the field of *simple handicraft art*—art carried on *without* the benefit of that newly found assistance.

To reduce the apparent infinitude of the subject within a comprehensible compass, it will be necessary, under the direction of the Logician, to apply the *Tactics* (the art of arrangement) of the *Naturalist* to the contents of the field of the *Technologist;* to bring together and class, the several sorts of *tools* and other *implements*—and *that*, in such a manner as to show how they agree with, and differ from, each other. In its character of a *school of Technology*, the *Chrestomathic School*, though not a *place*, would thus be a *source*, of general communication—*a channel*, through which the several sorts of artists might receive, from one another, instruction in relation to points of practice, at present peculiar to each. The *Carpenter*, the *Joiner*, the *Cabinet-maker*, the *Turner in wood*, the *Ship-builder*, &c.; the *Whitesmith*, the *Blacksmith*, the *Metal-founder*, the *Printer*, the *Engraver*, the *Mathematical Instrument Maker*, &c.; the *Tailor*, the *Shoemaker*, the *Collar-maker*, the *Saddler*, &c.; the *Distiller*, the *Brewer*, the *Sugar-baker*, the *Bread-baker*, &c. Of all these several artists, the respective *tools* and other *implements*—together with the *operations* performed by means of them—will thus be to be confronted together; and a comparative and comprehensive view will thus be to be given of their points of resemblance and difference.

Not to speak of the mutual information, capable of being by this means derived from one another by the *artists* themselves, to the *scholars* the effect will be that enlivening consciousness of mental vigour, and independent power, which is the fruit of learning in general, reaped from the soil of a highly cultivated mind. As, in virtue of the *Grammatical Exercises*, in the *Language* in which the instruction is delivered, there will be no *hard names;* so, in virtue of the *Exercises*, of which the field of *art-and-science* learning, including this appendage to it, is the subject—in the whole field of useful instruction,—there will be no *dark spots*.

So far as concerns the middling classes, the more extensive the view, thus obtained by the scholar, of the field of *Technology*, the more *usefully*, and to the bent, *natural* or *adventitious*, of his taste and inclination, the more *favourably*, (consideration had at the same time of his family circumstances and connexions,) will he thus find the field of his *livelihood* enlarged.

(90.) [*Book-keeping at Large.*] The *commercial* process or operation, on the subject of which, under the name of *Book-keeping*, works in such multitude have been published, is but a branch, a particular application, of an art, of the most extensive range, and proportionable importance: viz. the art of *Book-keeping at large;* the art of *Registration*, of *Recordation;* the art of securing and perpetuating *Evidence*. See Table II. *Principles*, Class III.

Correct, complete, clear, concise, easy to consult; in case of *error*, so framed as not to *cover* it, but to *afford indication* of it: *appropriate*, i. e. adapted to the particular practical purpose it has in view; the purpose, for the sake of which the labour thus bestowed is expended, —in these epithets may be seen the *qualities* desirable in a system of this kind. The new system of instruction, at any rate the original inventor's edition of it, presents to view a perfect specimen of the practice of this art, as applied to those inferior branches of instruction, which it has already taken in hand. In the Chrestomathic School, the principle thereby indicated will of course be pursued; but, proportioned to the superior extent of the *field* assumed by it, will necessarily be the extent and variety of the *application* made of it. In the practice of this most universally useful art, all those Scholars, who, from the lowest up to the highest Stages, in the character of *Teachers*, *Private Tutors*, or *Monitors*, bear any part in the management of the school, will gradually be initiated, and insensibly perfected: and, in proportion as any *Scholar* appears qualified to take any such part in it, it will be the duty and care of the *Master*, to put the means of so doing into his hands.

As, by the undermentioned *Abbé Gaultier*, the principles of the art of *Abridgment-making*, and thence of *Note-taking*, have been exhibited in a general point of view; so, between this time and the time at which the Chrestomathic population has reached its last and highest *stage*, no doubt but that some apt person will be found to perform the correspondent good office, in favour of the art of *Registration*, or *Book-keeping* at large.

(91.) [*Commercial Book-keeping.*] Commonly called, without addition, *Book-keeping*. As well in the form of *money* as in that of *money's worth*, the Chrestomathic School will, at all times, have its *receipts*, its *expenditure*, and its *stock in hand*. In its system of *Book-keeping at large*, it will, therefore, in so far, comprise and possess, a system of *Commercial Book-keeping*. But, to the Scholars, when they

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go abroad in the world, it will not suffice that they are initiated in the particular system of *Book-keeping* in use in *that* establishment: to such of them, at least, as hereafter betake themselves to any *commercial* occupation, it will be matter of *advantage*, not to say of *necessity*, to be no less perfectly acquainted with whatsoever system is in use in *other* establishments, and especially in those of which *commercial profit* is the object or end in view. The *Italian* method, or method of *Double Entry*, is the name given to that system of Book-keeping which is commonly employed in establishments of superior importance. Unfortunately, old-established as it is, the *obscurity* of this method is still more conspicuous than its *utility;* and, in consequence, *generation*, instead of *correction*, of Error, is but too frequent a result. This obscurity has, for its sole *cause*, the *fictitiousness*, and thence the *inexpressiveness*, or rather the *misexpressiveness*, of the language. The *fiction* has place in two principal instances: 1. in the employing the word designative of *debt*, in cases in which no such transaction really has had place; 2. in the ascribing to objects incapable of contracting this or any other obligation—such as the several articles of which the mass of commercial stock is composed—the *capacity* and *act* of contracting that same *legal obligation*. 3. Moreover, in direct opposition to an incontestable *principle of evidence*, the original *Record-book*, the basis of all the other books, is branded with a note of worthlessness, under the name of the *Waste-book*. Meantime, for the several events and states of things, to which these fictitious denominations are allotted, it cannot be but that other denominations, clear of Fiction, and, in a direct way and to the apprehension of mankind in general, expressive of the objects requiring to be designated—are to be found; and, by any such universally apt expressions, so many expositions and explanations will be given of the correspondent fictitious and unapt ones. In this design, a little work on this universally useful branch of *Logic*, was long ago planned, and is at present in preparation.*

(92.) [*Note-taking:*] i. e. taking *Notes* or *Memorandums* of the purport of any discourse, whether delivered *from book* or *without book;* for example, as here, for the purpose of *instruction:* and in the case of *exhibitions*, with or without memorandums taken, of the appearances presented by the objects *exhibited*. The *time* during which these notes *are taking*, being no other than the time during which the discourse is delivering, and the object exhibiting, including any such *pauses* as may happen to take place; the consequence is, that, with relation to the *original* from whence they are taken, any such notes can scarcely have place in any other form than that of an *abridgment;* and *that* an abridgment made *extempore*, upon the spur of the occasion, with very little time employable in the process of *consideration*. On this occasion, use will naturally be made of a masterly little work on this subject, published in English, by the *Abbé Gaultier*.

Note-taking being, in so far as the note falls short of being a complete copy, a species of *composition*, and, as such, in some sort, a product of *invention*, and *that* product produced *extempore*, and affording, at the same time, the most correct *test* of the correctness and completeness of the conception which, as appears by the note thus taken, has been formed of the original discourse: this is the sort of *exercise*, to the performance of which the maturest state of the mind is requisite; and which, therefore, ought to be the *last* of all the exercises, performed in relation to the several subjects of instruction that have place in the whole of the aggregate course. When all the several particular courses have been gone through, *without* the benefit of this auxiliary task, then will be the time for determining which of them stand most in need of it, and thereupon to which of them it shall be afforded.

(93.) [*School-room insufficient:*] viz. space in the school itself. In most instances, *Dancing*, *Riding*, *Fencing*, for example, the objection is obviously an insuperable one. In that of the *Military Exercise*, so would it be so far as concerns the particular portion of covered space in question; but, suppose a proper spot obtainable in the near neighbourhood, *this* objection, at any rate, vanishes.

(94.) [*Admission pregnant with exclusion:*] i. e. the branch of instruction in question, such, that by admission given to it, exclusion would unavoidably be put upon others; viz. upon some one, or more, or all of them. Thus, if instruction in *Music* were admitted, the noise would be such, that, while it was going on, the requisite degree of attention could not be paid to any other. So, if instruction in relation to controverted points of *Divinity*, were admitted, whatsoever were the tenets taught, a parent to whose notions those tenets were, to a certain degree, repugnant, would not send his child to a school, which numbered among its objects and its promises, the impregnating with those tenets the minds of its scholars.

The considerations by which, in the proposed course of instruction, nothing that regards Religion is intended to be comprised, are extremely simple; and it is hoped will receive the approbation of all parties.

1. Necessity of the course thus taken.
2. Needlessness of the opposite course.
3. Innoxiousness of the course thus taken.

Any one of these considerations might have sufficed to justify it; and all of them, it is believed, will be found to have place.

1. Necessity of the course thus taken.

For the purpose of this first experiment, on which so much depends, it has been, and is, the anxious desire of the managers, to have

* Some farther remarks on this subject will be found in vol. v. p. 383, *et seq.*

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the greatest number of children possible to try it upon, and that in the course of the whole length of time during which a continuance of the necessary exertion on the part of all the several numbers could reasonably be expected. The cheapness of the terms on which scholars can, in the Bell and Lancasterian systems, receive instruction; the cheapness of the terms, and, consequently, the number of the persons to whom the proposed benefit can be imparted, depends on the number capable of being instructed under one system of management, and one Head-master. In regard to the proposed mass of instruction, it has been matter of consideration to the managers, not only to what ages it was capable of being applied, but, moreover, at how small a rate of expense; and, consequently, to how large a proportion of the whole population it was capable of being administered. To this end it was, that the extent to be endeavoured to be given to the numbers proposed to be provided for in the first instance, was that which has been regarded, as the greatest for which in such a case, the inspecting eye of one and the same general master, could be made to suffice. To have put an exclusion upon any description of children, whose parents are able and willing to send them to the proposed Chrestomathic School, on the ground of Religion, would have deprived the managers of an indefinitely extensive number of children, on whom to try their first experiment; a number on which their wishes had fixed with a much stronger degree of intensity than their expectations.

2. Needlessness of the opposite course.

When, under the auspices of the National Society for the Instruction of Children in the inferior and most necessary branches of learning, a determination was taken to comprise, in the plan of their schools, the Christian Religion in general, and the Church of England form of it in particular, it could not but have been under the apprehension—nor that apprehension by any means an ill-grounded one—that to no inconsiderable proportion of the number of children so taught, if in those schools, religion, in that established form, were not to be taught, the consequence would be that neither in that form, nor in any other, religion would have been taught to them, or learnt by them at all.

But in the present case, that is in the case of the class of persons in whom, in addition to the desire of having instruction administered to their children on so extensive a field, shall be added a degree of pecuniary sufficiency adequate to the quantum of school-money, (the four guineas, or the two guineas, proposed to be required,) no such apprehensions could assuredly have place. By the omission in question, at any rate, no reasonable ground seems to present itself for apprehending that the number of scholars, sent to the proposed school, will in any degree be lessened.

By the very supposition, it could not in the case of those parents, if any such there be, to whom, in the character of a subject of instruction, religion is a matter of indifference. But in the case of those to whom it is not a matter of indifference, what objection can it form to the proposed plan,—that out of the twenty hours, six are employed in subjects other than that of religion, so long as there remains the number of eighteen hours, during any part of which, by themselves, or by their own chosen substitutes, religion, in whatsoever form is most comformable to their respective consciences, may be administered.

On this subject, a consideration highly material, and which cannot too carefully be kept in mind, is, that the proposed school is not a boarding-school,—it is a mere day-school, and nothing more. Were it a boarding-school, except during the comparatively short portions of time occupied by vacations, the scholars would stand precluded from receiving instruction on this head from any other source; and subject only to that exception, the effect of any arrangement by which the subject of Religion was excluded from the list of subjects taught in the school, would be to exclude it altogether, down to the time of his departure, from the scholar's mind.

The Music Master, the Dancing Master, the Writing Master, the Lecturer on Natural Philosophy, the Lecturer on Chemistry, the French Master, the Italian Master, no one of all these different sorts of instructors ever includes, or is expected to include Religion in his course. If, in the instruction administered by the schoolmaster by whom the dead languages, or one of them, are taught, Religion is now comprised, it is either because the school kept is a boarding-school, as in the case of the great public schools, having a set of boarding-schools attached to them; or because it has happened to the schoolmaster to belong to that particular profession from which such instruction cannot but be expected; or from some other such irrelevant and accidental cause.

3. Innoxiousness of the omission.

Notwithstanding all that has been said on this subject, one ground of possible apprehension, and hence of objection, remains, it must be acknowledged as yet unanswered. Good, says the father or the guardian: true it is during three-fourths of the child's time, (eighteen hours out of every twenty-four,) you leave me at liberty to administer to him on this most important of all subjects, instruction in what shape soever I think best; so far all is well: but of the remaining fourth part, (the space of six hours,) during which you are in possession of him, the whole time is to be employed in instruction, and the few casual moments during which alone my unavoidable avocations will admit of my administering instruction or causing it to be administered, to him, what will they avail, if so it should be that of those six hours, any part should, under your management, be employed in the administering of instruction repugnant to Religion in general,

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or to that form of it which, in my eyes, is the best, not to say the only good one.

In answer to an observation, of the reasonableness of which they are fully sensible, the reply of the managers, which the writer of these pages is authorised to make, will, it is hoped, be seen to be as full, and felt to be as satisfactory, as it is short. Under their management, no instruction that is repugnant or disrespectful to Religion in general, to the Christian Religion in particular, or to any one form of it, shall ever be administered.

Parents and guardians, the persons to whom this answer is immediately addressed, are not, it is true, as the proposed managers cannot fail to perceive, the persons on whom the success of the plan depends in the first instance, and to whom, in consequence, this proposal is most immediately addressed. But, for the most part, the answer, be it what it may, which is of a nature calculated to afford satisfaction to those, whose interest in the matter is so much greater than any that can be possessed by any one else, will, it is hoped, be in general found no less satisfactory to those whose interest is of inferior magnitude; and, in particular, to all such persons as on other grounds would feel disposed to contribute their assistance.

"Nay, but," says somebody, "it is not in the remissness of parents and guardians,—I am sorry to say the too general remissness of parents and guardians,—it is not in their indifference to this most important of all subjects,—it is not in the indifference of other people that I can find any sufficient warrant for the like indifference on my part. On the contrary, the more extensive, not to say general, this indifference, the more strongly is it incumbent on me, and on all others who join with me in worshipping God in that perfect form in which I worship, to do what depends on us towards making up for that deficiency. If, then, to the instruction which you administer on other subjects, you will add instruction on this, which is of more importance than all the others put together, and that in the particular form which, for no other reason than because it is the best, I hold to be the best, there is so much of my money for you; otherwise none."

In a discourse to some such effect as the above, there is nothing but what every person, engaging in an undertaking such as that in question, ought to be fully prepared to expect. In the eyes of a class of persons, nor that an inconsiderable one, which always has existed, nor will ever cease to exist, Religion, not only in the Church of England form, but in every form, is seen hanging on a thread—a thread which, by the blast of this or that speech, or by the flutter of this or that pamphlet, is in continual danger of being cut, while, without the support of their arm, the power of the Almighty is in continual danger of being overborne, his intentions defeated, his promises violated. To those to whom the promises of their God afford not any sufficient assurance, it were not to be expected that any firmer assurance should be afforded by any human promises.

In answer to such apprehensions, in as far as they may be capable of receiving one, no better remedy presents itself than would be afforded by that great institution, the National Institution, by which so much, and so much good, has already been accomplished. If, in aid of the first great cause, second causes must still be looked to, there may be seen a second cause of the most potent character, and to the contemplation of which the anxious persons in question cannot, consistently or naturally, be averse; a second cause of which, to the very purpose of calming these very anxieties, the power has so recently and so efficiently been applied.

As to the present humble attempt, why not then let it take its course? Why not even contribute to enable it to take its chance? If in other respects being useful, it be in respect of Religion, innocuous, it may claim, at any rate, the same sort and degree of indulgence, and even countenance, as that which has been recently bestowed upon a superior mode of raising mushrooms; and if, contrary to the solemn and thus publicly announced and disseminated engagement,—if the proposed managers prove prejudicial to the best interests of mankind on the subject of Religion, there stands that society to which, neither consistently with situation can the will, nor consistently with experience the power, be wanting—the power to reduce to thin air all danger from such a source.

In their hands are all the springs of human action, all the sources of reward or punishment. Let them but speak the word, and an hypsopromathic national school will raise itself aloft, and the Chrestomathic, should it even, by the humble endeavours of the proposed managers, have been completely filled, will find itself much more speedily emptied. In the very nature of the case, the little finger of the National Society will, at all times, be heavier than the arm of the Chrestomathic; and on the side on which the superiority of the weight of metal is so vast and so undisputable, could any possibility of failure be conceived how prodigious must be either, on the one hand, the indefensibleness of the cause, or, on the other hand, on the part of all but the supposed vanquished, the perversity of mankind!

With or without sharing in such apprehensions, real or pretended, as the above, there will be found another class of persons, and that a very numerous one, who, in the success of such an institution, cannot but view an injury, more or less serious, to their own particular interests. For on the part, of every person whose well-being, in any shape or degree, depends upon the continuance of any inferior mode of instruction (not to speak

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of governmental, legislative, administrative, judicative opposition,) opposition to every endeavour to substitute to it a superior one, ought, on every occasion, to be expected as a matter of course. As a particular interest, standing upon the face of it, in opposition to a more extensive interest, would not, to those who are actuated by it, present any very promising chance of being adopted by any persons who, without being themselves in the particular interest, should feel themselves standing in the general one, some other consideration than the really actuating one will, therefore, in this case, be looked out for; and when will any one be found so plausible or so likely to be impressive, as the apprehension just above mentioned?

It is not for ourselves, it is not for any such ever miserable sinners, and ever unprofitable servants, that we are and ought to be afraid. God and his cause—it is for that that we are afraid. Tie up tight, then, your purse-strings, and lest, by false, however fair, pretences, you should ever, for any such dangerous purposes, be tempted to untie them, against all such pretences keep your eyes steadily averted, and your ears as inexorably closed.

Deficiency of means is commonly one of the last causes which a man is disposed seriously to oppose to a demand which, in other respects, would not be unwelcome. In this, as in any other case, a more honourable excuse cannot be found than that which is presented by conscience; and where the will, though real, is not accompanied with the means, to subject the plea to a rigorous scrutiny would be adding hardship to hardship, without use. If, therefore, in the above suggestion, any unwilling refuser should find an excuse in serviceable condition, ready made to his hands, the labour expended in the putting it in order will not be without its use.

(95.) [*Time of life too early.*] Supposing that, in the instance of the branch of instruction in question, this objection could not, if considered as applied to the time of admission, be other than a peremptory one, it would not follow but that, before the close of the aggregate course, it may have altogether ceased.

(96.) [*Utility not sufficiently general.*] In the character of a *ground of omission*, this objection can scarcely be admitted to hold good, except in so far as *admission* would have for its effect the putting an *exclusion*, either altogether or in part, upon some other branch, of which the utility is more extensive; for, at any rate, the *Advantages*, attached in common to all learning (as per Col. I.,) would be among the fruits of it.

(97.) [*Gymnastic Exercises.*] *Gymnastic*, from a Greek word, which signifies *naked*. In the warmer climates of Greece, exercises, requiring bodily exertion, used to be performed in a state more nearly approaching to *nakedness* than that in which they are commonly performed, in times and places in which, as with us, there is less heat and more delicacy.

(98.) [*Military Exercise.*] See (93.) *Schoolroom insufficient*, and (99.) *Art of War*.

(99.) [*Art of War:*] including *Tactics*, *Military* and *Naval*. Of this art, the *Military Exercise* is itself one branch. So far as concerns this branch, neither can the *utility* of it (when the female sex is excepted) be said not to be sufficiently *general*, nor the *time of life* too *early*, so far as concerns the last year or two of the proposed schooltime.

(100.) [*Private Ethics or Morals.*] Important as is this branch of art and science, admission cannot consistently be given to it in the character of a *distinct* branch of art and science. *Controverted* points stand excluded, partly by the connexion they are apt to have with controverted points in *Divinity*, partly by the same considerations by which controverted points in divinity are themselves excluded. *Uncontroverted* points will come in—come in of course, and without any particular scheme of instruction—on the occasion of such passages in *History* and *Biography*, as come to be taken for the subjects of *Grammatical* and other *Exercises*.

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NOTES TO TABLE II.

I.—NOTES TO THE EXERCISES.

(a.) [*Mathetic.*] From a Greek word, which signifies *conducive to learning.* SYN. (i. e. *Synonymous terms* or *phrases*)—*Imbibitive, Acquisitive* exercises: exercises, by the performance of which, *instruction* or *learning* is *imbibed, acquired, obtained;* by which *progress is made, proficiency obtained,* or a lesson *got: simply* mathetic, to distinguish them from those which may be termed *mathetico-docimastic,* as per No. (9.) by which progress is *made,* and at the same time *exhibited.*

Correspondent, and, in its performance, *precedent,* as well as in some cases *subsequent,* to each species of exercise performed by the *learner,* is a *didactic* operation (*didactic,* from a Greek word, signifying *conducive to teaching,*) which must be performed by the *teacher.* From the general nature of the case, the nature of the didactic operation, correspondent to the mathetic exercise, will, without much difficulty, be conceived: but for greater clearness, and more particular designation, will in each instance be here given.

(b.) [*Probative.*] Syn. *Docimastic:* from a Greek word, which signifies the affording experimental proof, such as in chemistry is afforded by the case of a *test:* exercises, by the performance of which *proof* of progress or proficiency, and, if any, of the *degree* of it, is made: to this head belong the exercises, by the performance of which a lesson is *said.*

(1.) [*Orally or Scriptitiously.*] Orally, i. e. by word of mouth: scriptitiously, i. e. in writing, or in print: [*in terminis*] Syn. in the very *terms,* in the very words; in *tenor.*—*Correspondent* DIDACTIC OPERATION, *Delivery, oral* or *scriptitious,* of these same portions of discourse.

(2.) [*In purport.*] *Syn.* in words, which, however different, present the same *import, sense, meaning, signification*—the same *ideas*—are to the same *effect.*

On the difference between *tenor* and *purport* depends, (it will be seen,) in several very material respects, the nature and effect of this, and the *recitative* and *responsive* exercises, Nos. 5, 6, 7, and 8: viz. according as it is in *tenor* only, or in *purport* only, or in either indifferently, that the *recital* or *responsion* is required to be performed. See *Principles,* No. 23.

(3.) [*Sensible Objects.*] Such objects, by which ideas are presented to us, through the medium of any of our five *senses.* These are—1. In so far as *natural history* is the subject, bodies and portions of matter, in the
whether of *rest* or *motion,* in which th
found or observed, before they have bee
to undergo any change by *human* art.
so far as either *experimental philoso*
technology (i. e. knowledge of what bel
already established arts) is the subject
will be found referable to one or other
heads, viz. *operations, subject matters,*
ments, and results: 1. Operations, i. e. m
produced with the view of producing
sults: 2. Subject matters operated *up*
Instruments operated *with,* or *by mea*
and 4. Results, which are mostly
brought into some new form; but, in
instances, *motions* produced for some
purpose. *Correspondent didactic operat*
Making *exhibition* of those same sensib
jects.

(4.) [*Organic Exercises.*] Exercises,
performance of which *bodily organs* ar
ployed: as, in the case of *pronunciation,*
ing, and *reading,* the organs of *speech;*
case of *drawing* and *writing,* the *hand*
not merely, as in the case of *recollectio*
powers of the *mind. Correspondent* DI
OPERATIONS—*Prescription* and *directi*
these same organic exercises: and, in
drawing and *writing, inspection* of the
products.

(5, 6.) [*Simply Recitative Exercises.*]
tative, i. e. consisting in the *reciting* or
ing of some portions of discourse, as deli
by *word of mouth,* or in *print* or *writing*
which purpose it must have been *gott*
heart, as the phrase is; and, according
delivered in *print,* said *off book,* as the p
is, or *out of book,* or *without book, simply:*
to distinguish this from the *responsive*
cises, No. (7.)

(7, 8.) [*Responsive Exercises.*] *Correspo*
DIDACTIC OPERATION, *interrogative examina*
i. e. *prescription* and *direction* of this
exercise.

(9.) [*Test of Intellection.*] i. e. as a
of his *understanding,* or a *trial,* how far,
all, he understands, what he has *heard* or
peated; for, a case, which otherwise is but
apt to happen, is that, after having *heard*
after having *read,* and thereupon learnt
repeat, though it be ever so correctly and
pletely, the *words* of a discourse, which,
that purpose, have been *delivered* to him,
pupil,—instead of laying up in his mind
proper, i. e. the intended, *meaning,* No. (

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ising prin-
. 368. 372.

intellection,
9. 365.
lly perfect
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2. 253. 263.
297. 298.
352. 353.

ng, or *Gra-*
y, principle,

apitulation

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10. IV.
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naximizing
ts, p. 84.

t employ-
275. 289.

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izing prin-

n and pro-
290. 354.

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y principle.
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inciple. II.
216.] 217.
362. 387.

ening the *time,* employed in the acquisition of the proposed body of instruction, and *increasing* the *number* of Pupils, made to acquire it, by the *same Teachers,* at the *same time.*

31. I. *Simplification maximizing,* or *Short lesson employing,* principle. II. 194. 195. 202. 203. [207.] 208. 210. [223.] 224. 263. 265. 272. 275. 294. 302. 331. 351. 355. 356. 362. 363. 369. 371. 385. 410. 427. 441. 442. 439.

32. II. *Universal-simultaneous-action promising* and *effecting* principle. II. 215. 285. 287.

33. III. *Constantly - uninterrupted-action promising* and *effecting* principle. II. 252. 263. 283. 364. 439.

34. IV. *Word of command employing,* or *Audible-direction abbreviating* principle. (*Lancaster,* 110. See No. 23.) II. 250 to 254. 280. 281. 310. 360. 363. I. 30.

35. V. *Universally visible signal,* or *pattern employing,* or *Universally* and *simultaneously visible direction employing,* principle. II. 254. 270. 275. 279. 440. 443.

36. VI. *Needless repetition* and *commoration excluding* principle. II. 252. 282. 288. 354. 373. 439. 442.

37. VII. Remembrance assisting Metre - employment maximizing principle.

38. VIII. *Employment varying,* or *Task-alternating* principle. II. 252. 283. 289. 290. 264.

tinct intonation exacting principle. II. 132. 299.

40. II. *Syllabic lection exacting,* or *Syllable-distinguishing intonation employing,* principle. II. 287. 362. 370. 412. I. 27.

41. III. *Recapitulatory-spelling discarding,* or *Unreiterated-spelling exacting,* principle. II. 280. 303. 304. 306. 370. 412.

42. IV. *Vitiously retroactive repetition,* or *Balbutient recollection-assisting repetition prohibiting,* principle, II. 132. 240. 252. 260. 262. 288. 354. 373.

43. V. *Sand - Writing employing,* or *Psammographic,* principle. II. 88. 89. 91. 270. 274. 276. 279. 327. 350. 370. 412. 427. 441. I. 24. 25.

II. To *Geometry* and *Algebra.*

☞ For several proposed principles of instruction not referable to this system, see the tract, printed as Appendix, No. VIII.

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the *meaning* which the words were intended to *convey*, and in the *conveyance* of which consists their sole *use*—contains in his mind—has in his *memory*, nothing but the bare *words;* i. e. the *sounds*, with or without the *forms* presented to the eye by the series of the *letters:* i. e. *no* meaning at all, or some meaning more or less *improper*—more or less *incorrect* or *incomplete*. For putting him to this trial, one mode or *test* is, the calling upon him, viz. by a *question*, expressed, whether in the same words, or in different words, to deliver the *same meaning*, but expressed in *other words*. Another expedient is confined to the case, where the object of the instruction is, to teach the practice of some branch of *art*, to the practice of which the exercise of some *bodily organ* is necessary, or some branch of *science*, the *possession* of which is capable of being *proved* by the *practice* of some correspondent *art:* in this latter case, the *fact*, viz. of his *understanding* the *meaning* of the *words*, by which the instruction in question relative to the *science* was expressed, is capable of being *proved*, in some degree, by his performing some *organical operation*, by the performance of which the correspondent *art* is practised.

Thus, in so far as his *pronunciation* is correct, he affords a proof that the instructions, which have been conveyed to him on the subject of the art of *speaking*, are, in so far, not only *remembered* by him, but *understood;* in so far as his *writing* is correct, that the corresponding instructions, on the subject of the art of *writing*, are, in so far, not only remembered, but understood: if, after the description given to him of the characteristic marks of this or that species of *plant*, or *animal*, or *tool*, or *utensil*, or *mathematical figure*, he is able to give expression, and has accordingly given expression, to these same marks, by *drawing*, here, likewise, in so far as the *figure* drawn by him is correct, he has afforded a proof that that same description has not only been *remembered* by him, but *understood*. *Correspondent* DIDACTIC OPERATIONS, Prescription and direction of those same exercises; organic operations, and, in the case of *drawing* or *writing*, inspection of the result.

(10.) [*Note-taking.*] The principal and most immediate use of this exercise is to serve as a *test* of *intellection*, as per (No. 9.); especially in so far as the nature of the subject admits not the application of the sort of *organic* test therein described.

But in it is included a certain species of *composition*, and thereby a certain degree of *invention*. It is, therefore, among the *highest* species of exercise; a task, for the due and effectual performance of which, the maturest state of the minds, for which the course of instruction here in question is designed, will probably be found requisite. *Correspondent* DIDACTIC OPERATIONS, *Prescription* and *direction* of this same exercise, and *inspection* of the *notes*, which are the result of it. To one or other of these exercises, *mathetic* and *probative*, or both in one, every possible mode of instruction, applicable to *intellectual* instruction in general, will, it is supposed, be found reducible; and if it be true, as supposed, that there is not one of them which is not—and that with the full benefit of the Bell Instruction System—applicable to all the several branches of that learning, enumerated in the course of this work, the applicability of that system, with a degree of advantage equal to what has been so universally experienced in the lower order of schools, to those several branches, when taught in the proposed Chrestomathic School, will, it is hoped, be found to be placed out of the reach of doubt.

(11.) [*Parsing.*] In the exercise called *parsing*, two distinguishable operations are supposed to be commonly included: viz. 1. Indication of the grammatical *relations*, which the component words of each sentence bear to another; 2. Indication of the grammatical *rules*, by which the custom of the language, in those particulars, is expressed, and conformity to that custom accordingly prescribed.

[*Canoniphantic.*] From a Greek word signifying a *rule*, and another signifying *indication*. *Correspondent didactic operation*, Prescription and direction of this same exercise, and, if performed in writing, inspection of the result. This same description applies to the several didactic operations, corresponding to the several exercises herein aftermentioned.

(12.) [*Single Translation.*] This exercise wears a different character, and is productive of different effects, according as the *vernacular* language is or is not one of the two languages; and if yes, according as the *foreign* language in question is translated *from*, or translated *into*.

(13.) [*Double* or *reciprocal Translation.*] This exercise wears a different character according to the diversifications mentioned in the case of single translation, and according as literal conformity on the one or the other side, or on both, is, or is not, exacted.

(14.) [*Clark's Exercise.*] Advantages attached to this exercise, in comparison with translation *into*, or composition *in*, the foreign language, with the help of a *dictionary*. 1. Saving of the *time*, *necessary* to the finding out of the word. 2. Saving of the *time*, *naturally* and frequently consumed, in *inaction* or *irrelevant reading*, in the course of the search. 3. Saving of the *perplexity*, attendant on the *choice* between the several words presented by the dictionary; a choice to which, for a long time, the pupil continues irremediably incompetent.

(15.) [*Metre restoring.*] A verse being chosen by the Master, and the words thrown out of their order, in such sort that they no longer constitute a verse, this exercise consists in *restoring* them to their *order:* to which purpose some acquaintance with the nature of the *sort* of verse, and the rules of *Prosody*,

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i. e. *versification*, in general, is necessary. This exercise operates therefore as a *test*—not only of *remembrance*—but of intellection, with regard to those rules.

(16.) [*Prosodial non-significant.*] In schools this is called making *nonsense verses*. Accident will every now and then give to the nonsense the appearance of ludicrous sense. To this exercise, the *metre restoring* exercise may serve as an introduction. It affords a certainty of success: and saves the *time*, that would otherwise be to be employed in the search of words. By the shortness of the time requisite, it would be, in a particular degree, well adapted to the present system. See No. (31.) *Short-Lesson* principle. Whether it has anywhere been employed cannot here be stated. The idea of it was suggested by that of *Clark's* Exercise.

(17.) [*Purely-metrical Translation.*] In this case the translation is *into* metre, and may be performed *from* other metre, or from prose: the exercise being purely metrical, the *language* is the same on both sides. One of the *Westminster School* exercises used to be—taking an epigram of Martial, or an ode of Horace, and translating it *into* some other of the species of verse to be found in the same books. Its objects are—1. familiarizing the learner with the *metre* into which he translates; 2. giving him a command of words in the *language*.

II. NOTES TO THE PRINCIPLES.

(c.) [*Principles of Management.*] Of the plan pursued in the giving of *names* to these several principles, the idea was taken from the practice of the *House of Commons*, in their *Votes*, as copied or imitated in the *newspapers*, in relation to *Bills* when spoken of on the occasion of their progress in the Houses. Any names less uncouth and more expressive, will, if suggested, be gratefully received, and gladly substituted. It is only by giving thus to *each* its *particular* name, (viz. in the form of a compound substantive or adjective,) and to *all* one *common* name, viz. *principles*, that the arrangements could be employed, by which the particular *ends* and *uses* common to each class, and the sort of *relation* borne by each principle to *every other*, and thence to the *whole system*, are, as here, brought together in one point of view; and thereby the whole system exposed in the most commodious manner to that scrutiny, by which, in proportion as it is close and intimate, the perfection of the system will, it is believed, be rendered manifest.

(1.) [*Scholar-Teacher Principle.*] The principle, which consists in employing, as *teachers* to the rest, some of the most advanced, and in other respects most capable, among the *scholars* themselves:—*maximizing* the use and application made of this principle, i. e. giving to it the utmost extent capable of being given to it with advantage—raising it to a *maximum*. In this *maximization* consists the only peculiarity, and correspondent utility, of this part of the system.—*Advantages* gained, I. *Saving in money*. Every *professional teacher* would need to be paid; no such *scholar-teacher* needs to be, or is paid. II. *Saving in Time*. Under the inspection of one *professional General Master*, the whole number of Scholars may be cast into as many classes as there are different *branches of instruction*, and different *degrees of proficiency* in each: each such class under the direction of its *Scholar-Teacher*; the instruction of all these classes going on at the same time. III. *Increase in relative aptitude*. 1. For securing the attention of a *grown* person in the character of *Teacher* to such business, especially in the case of those lowest branches, which form the occupation of children but just emerged from infancy, the nature of the case scarce admits of any other generally applying motive than *fear*; viz. the fear of losing the *situation*; i. e. the *provision* annexed to it. In it he can find neither *instruction*, *amusement*, nor, except that fear, any other cause of *interest*: his attention is perpetually called off by such *other* ideas, whatsoever they may be, in which, for the moment, it happens to him to take an interest. In the breast of the *Scholar-Teacher*, the *honour* and *power*, attached to the function, cannot fail of operating in the character of a *reward*; of a reward, the operativeness and sufficiency of which has been proved by an ample and uninterrupted body of experience. Instead of being so completely *stale* as in the other case, the *subject*, contemplated in this new point of view, is not yet become so familiar as to have lost altogether the sort of *interest*, which, particularly in a juvenile mind, is attached to *novelty*:—especially, coupled as it is with the situation of *judge*, presiding on the occasion of the contest, produced by the application of the *place-capturing* principle, No. (10.) 2. By his age and situation, the *juvenile*, and completely subject *Teacher*, is, to a certainty and constancy, rendered more tractable, than a *grown-up under-Master* can ever be reasonably expected to be. On each point, the *grown-up Teacher* is liable to have an *opinion* of his own, and with it a *will* of his own, contrary to that of his superior and employer; to which *will*, at any rate during the *absence* or *inattention* of such his principal, it is in his power to give effect. To the juvenile and subject *Scholar-Teacher*, this can never happen. The

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professional under-Teacher, be his negligence or perversity what it may, cannot be subjected to any other *punishment* than that of *dismissal:* a punishment, by the infliction of which, it will frequently happen, that the *judge* would be no less a sufferer than the *delinquent.* IV. By teaching *others*, the scholar is, at the same time, teaching *himself:* imprinting, more and more deeply, into his own mind, whatsoever ideas he has received into it in the character of a *learner:* taking of them, at the same time, a somewhat new and more commanding view, tinged, as they are, with an enlivening colour by the associated ideas of *reputation*, and of that *power*, which has been the fruit of it.

The application of this principle is, therefore, not a *make-shift*, occasionally employed, as under the old system, for want of a sufficient supply of *grown-up* under-Teachers, but an *essential feature*, operating to the complete and *purposed* exclusion, of all such naturally reluctant and untractable subordinates.

But the faculty, of giving to this principle any such extension *to advantage*, depends, in no inconsiderable degree, on several *other* parts of the system, viz. on the *simplicity*, and thence on the *shortness*, of the *lessons*, as per No. (31.); on the *extent* to which the practices of *repetition* and *responsion* in *terminis*, Exercises, No. (5.) and (7.) can be applied to advantage, and thereupon to the extent to which, in the character of a *test* of *intellection*, as per No. (24.) and (25.), their *checks*, viz. the *organic* species of exercise, and the *note-taking* exercise, can be employed; and in so far as responsion in *purport* is either extracted or received, the allowance given to eventual *appeal*, as per No. (11.), from the decisions of the juvenile under-Teacher to the Master—the supreme and universal judge.

(2.) [*Contiguous proficiency principle.*] On this sort of contiguity depends, as hath just been seen, no small part of the advantage, which the case of the *Scholar-Teacher* has over that of the *grown-up Teacher:* but, the higher advanced in the line of proficiency the *Scholar-Teacher* is above his pupils, the nearer does his situation approach to that of *grown-up Teacher: honour* less, *power* less gratifying, *instruction* and *amusement*, if any, less and less. At the same time, what may not unfrequently happen, especially in the case of the lowest classes, is, that at an age, at which, in respect of proficiency in *learning*, he is ripe for the office, the Scholar is not so as yet in respect of the faculty of *discretion*, or that of *judicature.* So far as, in respect of these latter qualifications, a deficiency has place, so far *a departure* from the *contiguous proficiency* principle may be found necessary.

(3.) [*Scholar-Tutor principle.*] The Scholar-*Teacher* delivers the directions to the *whole number* of pupils in a class at once; he presides over the *probative*, and in particular over the *recitative* and *responsive* exercises, Nos. (5.) and (7.), performed *by all together*, under the spur of the *place-capturing* principle, No. (10.)—exercises, by the performance of which the several lessons are *said.* By the Scholar-*Tutor*, assistance is, in case of need, afforded to some *one* other Scholar, attached to him for this purpose in the character of a *private pupil*, during the several portions of time, allotted for the *getting* of the respective lessons. The local station of the Scholar-*Teacher* is, consequently, a distinguished and *solitary* one; that of the Scholar-*Tutor* is a *social* one, just by the side of his *pupil.* The less the degree of general capacity on the part of the *pupil*, the greater is the degree of the like capacity needful on the part of the occasional *assistant.* On this principle it is, that the operation of *pairing* is performed. Suppose, in one class, *eleven Scholars*, and to each a different degree of capacity, for this purpose, ascribed; he who has *eleven degrees* is paired with him who has but *one;* he who has *ten* degrees, with him who has *two;* he who has *six* degrees, remaining single.

(4.) [*Scholar-Monitor principle.*] Of this office—an office of indispensable necessity in all large schools upon the ordinary plan—little or no need will probably be found, on the plan of architectural construction prescribed by the *Panopticon* principle, No. (9.), by which every human object in the whole building is kept throughout within the reach of the *Head-Master's* eye.

[*Master's Time-saving principle.*] The *Managing* Master is but *one:* to the number of the *Scholar*-Masters there are no limits, but what experienced convenience dictates. Whatsoever can be equally well done by any one or more of *them*, *his* time would be very ill employed in doing or endeavouring to do. General inspection and direction is the business which *must* be done by *him*, and *cannot* be done by any one else: whatsoever time is by *him* employed on any *other* business, the danger is, lest it be taken from that which is necessary to the performance of his *peculiar* business, as above.

(6.) [*Regular Visitation principle.*] The operation of this sort of tribunal is an advantage which a school, instituted and supported by *contributions*, possesses in comparison with an ordinary school. By the schools carried on under the superintendence of the Society called the *National Society*, it may in general be expected to be possessed, in a degree more or less considerable, according to *local* circumstances. By the *Chrestomathic* School, it may reasonably be expected to be possessed in a still superior degree, the superiority of which will be proportioned to the ulterior *interest* possessed by the conductors in this case, in *addition* to that possessed by the superintendants in that other case. But the means which the visiters, be they who they may, have for the execution of their trust to advantage and with effect, depend almost altogether upon the principles, Nos. (13, 14, 15, 16,) respect-

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ing *Evidence:* the good effects producible by the *judgment* which, on each occasion, they *pronounce*, and the *arrangements* which they *make* in relation to what *is to be* done, are completely dependent upon the *knowledge* which they possess, upon the *information* which they have received, concerning what *has been* done.

(7.) [*Punishment minimizing principle.*]

(8.) [*Reward economizing principle.*] Two intimately connected principles, both of them of cardinal importance, may be seen, in the idea and practice of setting up these *results* in the character of *ends* or *objects* to be aimed at: these, together with the several *maximizing* principles, Nos. (1.) (3.) (13.) (14.) (22.) (23.) (24.) (25.) (26.) (31.) (37.) and the several *promissory* principles, Nos. (17.) (19.) (30.) (32.) (33.) may be considered as so many branches of that all-pervading principle, so peculiar to this system, by which *perfection*, on every point, the idea of it having been conceived, is represented as *capable of being*, and therefore as being what *ought to be*, obtained. To give effect to these *two* principles is the *object* and *effect* of the *four others* which, in this same division, follow them.

Facility of delinquency, inapplicability of *reward, uncertainty* of the *forthcomingness* of *evidence*, and thence of the application of whatever of *punishment* or *reward* may be intended to be administered,—as those several quantities *increase*, so does the *quantity* (i. e. the *intensity* or *duration*) of the *punishment*, necessitated: in proportion as any of these quantities *decrease*, so (if nothing be wrong in the system of judicature) may the *quantity* of *punishment* denounced and applied: always understood, that punishment is *no* punishment unless, supposing it inflicted, the *suffering* produced by it is, in the eyes of *the person under temptation, greater*, than the *enjoyment* expected from the *offence*. By the application made of the *Inspection principle*, No. (9.) and the *Scholar-Tutor principle*, No. (3.), the *facility* of delinquency is, in all its shapes nearly done away: by the *Short Lesson principle*, No. (31.) the *pain* of *labour*, and thence the *pleasure* afforded by *delinquency* in the shape of *idleness*, is *minimized;* by the *Place-capturing principle*, No. (10.), *reward* to the well-doer is rendered, *so far*, a constant accompaniment of the gentle *punishment*, brought on the offender by the offence: by the principles respecting *evidence*, Nos. (13.) (14.) (15.) (16.), operating in conjunction with the *Inspection principle*, all uncertainty respecting *evidence* is done away.

As to *reward* but for the apparent paradoxicality and anti-sentimentality, instead of *economizing, minimizing* would, in this case, as in the case of *punishment*, have been inserted. For (perfectly free donations excepted) never can the matter of *reward* be obtained, to pour into *one* bosom, but at the expense of *suffering*, however remote and disguised, inflicted upon *others*. Neither in *power*, in *dignities*, in *honours*—no, nor even in simple *reputation*, will any exception be found to this rule. Therefore it is, that, in a government, though tyranny may exist without profusion, profusion cannot exist without correspondent tyranny.

(9.) [*Inspection principle.*] In the *Bell-Instruction* System in general, in virtue of the *Scholar-Teacher*, &c., principles Nos. (1.) (3.) (4.), and the *Master's time saving principle*, No. (5.), with or without *locomotion* on the part of the Master, this object, it may be reasonably supposed, is nearly accomplished: though, in so far as concerns inspection by the Master, the degree will naturally be less and less, in proportion as the *School-room* is more ample, and by that means drawn out into *length*. By the *Panopticon* principle of construction, security, in this respect, is *maximized*, and rendered entire: viz., partly by *minimizing* the distance between the situation of the *remotest Scholar* and that of the *Master's eye;* partly, by giving to the *floor* or *floors* that *inclination*, which, to a certain degree, prevents remoter objects from being *eclipsed* by nearer ones; partly by enabling the Master *to see without being seen*, whereby, to those who, at the moment, are unseen by him, it cannot be *known* that they are in this case. In the *Chrestomathic* School this plan of construction is of course to be employed.

(10.) [*Place-capturing principle.*] On the occasion of the *saying* of a lesson, whatever it be, the scholars, by whom that same lesson has been *got*, are placed, or are kept, standing or sitting, in one line, straight or curved, as is found most convenient; with an understanding, that he whose place is at one end of the line is considered (no matter on what account) as occupying, at the time, the post of greatest *honour;* the one whose place is next to his, the post next in honour; and so on. The *highest* scholar, as above, begins to *say* the lesson: in case of an error, the *next highest*, on giving indication of it, takes, in pursuance of an instantaneous adjudication, the *first place*, which the *sayer* of the lesson is, in punishment for such his delinquency, adjudged to lose: failing the next, the next but one; and so on to the lowest. By this means, the *intellectual* exercise, be it what it may, is, like most of those *corporal* exercises in which youth are wont to occupy themselves for mere amusement, converted into a *game: punishment* attaching instantaneously upon *demerit*, and, by the same operation, *reward* upon *merit*, and in both cases, without further trouble or expense in any shape.

(11.) [*Appeal providing principle.*] viz. from *Scholar-master* in any one of these his three characters, *Public-teacher, Private-tutor*, and *Monitor*. For this appeal, the principal, and, indeed, almost sole demand, will be found to be that which is capable of being constituted by the application of the *Place-capturing* principle, No. (10): especially where, on the occasion of the *probative* exercise to which it

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is applied, either *no fixt verbal standard of reference*, as per No. (23.) is employed, or where, this sort of standard being employed, *literal conformity* to it is *not* exacted. The greater the *latitude* allowed to performance, the greater the room for *error*, and *suspicion* of error, in whatsoever Judgment may happen to have been passed upon it.

(12.) [*Scholar Jury principle.*] *Advantages.* 1. The *Master* stands hereby preserved, in a great degree, if not altogether, from the suspicion of *partiality* and *tyranny*. 2. By the necessary solemnities by which the application of the *punishment* is thus preceded, the attention of the *scholar* is more firmly fixt upon it, and the idea of it rendered the more impressive. 3. The scholars are, at this early age, initiated in the exercise of the functions of *judicature*, as well as in the *knowledge* of what belongs to *justice*, while the *love* of it instils itself into their breasts. 4. The tendency, so natural amongst persons of any age subject to coercion, to unite in a sort of *standing conspiracy* against those by whom they are kept under that pressure, is counteracted and diminished.

(13.) [*Progress Registration principle.*]

(14.) [*Comparative Proficiency principle.*] Every *lesson* being taken from some determinate *book*, the designation of every *exercise* is performed and perpetuated by *reference* made to that part of the book which has been the subject of it. On each day, of the *lessons* which, on that day, have, by the several *classes*, been *got* and *said*, together with the *organic* exercises, No. (24.), if any, which have been *performed*, the designation is given, by entries made in the *Aggregate* Register; and, at the same time, the name of each *scholar*, present or absent, belonging to each *class*, together with the *rank* which, as the result of the *place-capturing* contest, No. (10.) of *that* day, or the last on which he was present, has remained to him in his class. The *Comparative proficiency* Register contains a distinct *head* for each scholar. It exhibits, for any portion of *time*, the *class* he has belonged to, and thence, as above, the *lessons*, which in that class he has got and said, and the *organic exercises* which he has performed, and the *rank* which, putting *all* the days together, he has occupied in such his *class*. Thus his account is formed, by copying from the *Aggregate* Register, and summing up, the *numbers* expressive of the *rank*, which he has been found occupying on the several *days* included in the term: the *less* the sum, the *higher*, of course, his rank, taking the whole of the term together. If, for a certain length of time, he is at or near the *top* of the class, it will be a sign, that he is quite or nearly ripe for removal to a *higher* class; and, in the meantime, that he is, to a certain degree, qualified for lending assistance, upon occasion, in the character of *Private Tutor*, as per No. (3.) to a *class-fellow*, whose degree of *proficiency*, as indicated by the same document, is, in a correspondent degree, *inferior* to his own; and, in like manner, in proportion as the sum is *large*, the correspondent and *opposite* indication is afforded. Thus it is, that this *Register* forms the basis of the application made of the *Scholar-Tutor* principle, No. (3.) as well as of the *apposite-classification* principle, No. (30.)

(15.) [*Delinquency Registration principle.*]

(16.) [*Delation exacting principle.*] By the *Aggregate Progress* Register, No. (13.), so far as concerns such *transgressions* as are of a purely *literary* cast, the *balance*, formed by the sum of the several acts of *transgression*, compared with that of the correspondent manifestations of *merit*, stands recorded; and, upon this plan of *in*struction, and *con*struction, as per No. (9.), seldom, indeed, in any *other* than a literary shape, can delinquency find entrance. By a person, in whose eyes an *offence* which he feels himself under the temptation of committing, is sure to be immediately followed by a *punishment*, the sufferance of which is sure to be greater than the enjoyment from the offence, the offence will not be committed. In an *edifice*, in which nothing can be done that is not, at the same time, certainly by an *under* master, and probably by the *Head* master, seen *while doing*, scarcely will any forbidden act be committed. Punishment, eventual punishment, must, notwithstanding, be appointed; otherwise mere *sport* and *wantonness* would, as well as *idleness*, suffice for the production of offences. But, in such a state of things, a punishment of the *slightest* kind and degree imaginable, will, it is evident, suffice. The bare assurance that his *name* will, in the character of that of a *delinquent*, be made to stand upon the face of a durable and more or less extensively published *Register*, may, in the instance of almost any human being, old or young, as experience, in confirmation of theory, testifies, be depended upon, as being, *in such a situation*, of itself a sufficient punishment. At the same time, for appearance sake, bodily uneasiness, in this or that *slight* shape, may stand appointed; and with the less scruple, on account of the moral certainty of its being seldom, if ever, about to be inflicted. As to the *Universal Delation principle*, under *Dr Bell's* system, every *scholar*, especially if acting in the character of *Teacher*, *Tutor*, or *Monitor*, is *responsible* (i. e. *punishable*) for every instance of *delinquency*, of which, it having been committed in his *view*, or otherwise within his *knowledge*, he has omitted to give information to the *Master*; and, where the *heaviest punishment* that can be the result of such information is but as a *feather*, such, therefore, will this *obligation* be. Light, as under that system it cannot but be, even where the scene is an *ordinary* school-room—in a school-room in which, as per No. (9.), everything is no sooner *done* than *seen*, it will be still lighter.

(17.) [*Proficiency promising principle.*] *Performance*, it may here seem, is everything: *promise*, of itself, promise without performance,

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nothing. True, if *without* performance: but it is the nature of promise to operate as a *security* for performance. Hence the laying it down as a *rule*, that *no* scholar shall be considered as *incapable* of imbibing the instruction which is administered, is itself a most important *principle*. It operates as an *engagement*, upon all concerned. True it is, that if, *without blame* on the part of the engager, the fulfilment of the engagement were liable to be defeated; or even if, *by reason of blame* on his part, it were, to a certain degree of frequency, *likely* to be defeated, the engagement ought not to be administered. But that, under the *Bell-Instruction* System, such fulfilment is, in every instance, in the *Master's* power,—is a truth, indicated by theory, and confirmed by experience. By this principle, such perfection is pointed out as a *producible*, and, therefore, *exigible*, result. So far as concerns the already established *lower* stages of instruction, it stands confirmed by every publication which the subject has produced: of its extension to those *higher* stages, which are included in the *Great Grammar Schools*, proof will be found in the *letters* of *Mr Pillans* and *Mr Grey*, mentioned or inserted in the *Chrestomathoscopia*, or its Appendix.* In the remaining principles, belonging to this division, Nos. from (18.) to (30.) may be seen the several *means immediately* operating towards so desirable an end.

(18.) [*Non-conception presuming principle.*] By this principle, as brought to view in the works of *Dr Bell*, reference is made to a practice, which, among *masters*, is so *natural*, and is said to be so *common*,—viz. to keep *repeating*, on each occasion, their instructions, instead of taking the earliest opportunity for *ascertaining* whether, by the pupil in question, these instructions have been *comprehended*. But, under the *Bell-Instruction* System, and, in particular, under the extended application here proposed to be made of it:—1. In the first place, the matter of instruction being throughout *determinate*, and *in print*, the demand for such *intermediate* discourse, on the part of the *master*, will hardly have place:—2. In the next place, no discourse in the form of *instruction* being admitted, but that the most efficient *tests of intellection*, as per Nos. (10.) (22.) (24.) such as the nature of the case admits of, are provided and applied to it,—the *danger of transgression*, and the consequent *demand for application*, will, in the instance of this rule, be proportionably inconsiderable: and, 3. The *greater the number* of the scholars, learning under the direction of *one Head-master*, the fuller the assurance that, by the perception of *impracticability*, under the warning given by this principle, he will be kept from the attempt.

(19.) [*Perfect Performance exacting principle.*] In this may be seen one of the necessary means, without which the engagement taken in virtue of No. (17.) cannot be fulfilled. It will itself be seen to have for its true principal and most immediate supporters, the *Short Lesson principle*, No. (31.) and the *Apposite Classification principle*, No. (30.) By the *Short Lesson principle*, provision is made, that the *earliest*, i. e. the *least difficult* lessons, shall be so *easy*, that the dullest capacity cannot fail of *comprehending* them, or the slowest fail of learning, sooner or later, to *perform* them; i. e. to *get* them within the allotted length of time. By that *probative* species of exercise, the uniform application of which is prescribed by Nos. (23.) and (24.) under the influence of the *Place-capturing principle*, No. (10.) it will, by means of the indication afforded by the *progress*, and *Comparative proficiency* Registration *principles*, Nos. (13.) and (14.) be seen how soon, under the spur of the *Place-capturing principle*, No. (10.) the scholar is become sufficiently *perfect* in his *performance*: and, till he is so perfect, be his age what it will, he will, in virtue of the *Apposite Classification principle*, be kept in that *same* class, without advancement to a higher; continuing to be thus *taught*, until he has *learnt*.

(20.) [*Gradual Progression principle.*] The use of this principle is, to operate as a sort of *memento*: and thence,—in the first place, on the part of the planners of the system of *exercises*, in the next place, on the part of the *Masters*, by whom they are to be applied and carried into effect,—to render the transition,—from an exercise easier, and lower in species or degree, to the next succeeding exercise,—as *gradual*, and, as it were, as *insensible* as possible. Of the degree of regard paid to this principle—of this, as of every other material circumstance—information will be given to *Visiters* as well as *Masters*, by the *Progress Register*, No. (13.) Supposing the rule transgressed, the *wider* and more *frequent* the instances of transgression, the more *manifest* will they be rendered: viz. in the first place, to the *Scholar-Teacher*, by means of the numerous transgressions manifested under the *Place-capturing principle*, No. (10.) on the *saying* of the *lesson*;—in the next place, to the *Visiters*, as well as to the *Master*, by means of the *sudden downfall* of one or more of the *scholars*, whose rank had, till this time, been among the most advanced.

(21.) [*Adequate Recapitulation principle.*] In so far as the substance of any antecedent lesson is forgotten, especially when the *remembrance* of an *antecedent* is necessary to the *intellection* of a *subsequent* lesson, the time employed in *subsequent* ones will have been expended with little fruit, and progress and proficiency will be more *apparent* than *real*. As it stands here, the *use* of the principle is—to serve as a *memento*: the *application* of it must depend, partly on the nature of the *branch of learning* in question, partly on the nature of the *exercise*. In this view, the most *favourable* state of things is that which has place, in so far as, between what has *gone*

* *Vide* Appendices III. and IV.

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before and what *comes after*, the *connexion* is so *intimate*, that a *subsequent* lesson cannot be *said* or *got*, but in proportion as an *antecedent* lesson is *remembered*. For its antagonist and necessary *check*, this *memento* has that which is conveyed by a succeeding principle :—viz. The *Needless Commoration excluding principle*, No. (36.)

(22.) [*Place-capturing probative Exercise maximizing principle.*] and (23.) *Literal Conformity maximizing principle.*] On the constancy of the application made of the correspondent *probative* exercise, by which a lesson is *said*, depends all the use derivable from any *mathetic* exercise, by which that same lesson is supposed to be *got*. On the effect produced by the exciting and invigorating influence of the *Place-capturing* process, No. (10.) depends, in a prodigious degree, the effect of every *probative* exercise. In the *greater number* of schools of the *higher* class, no use at all *is* made ; nor, indeed, for want of a sufficient number of scholars in a class, *can* be made, of the *Place-capturing* process, No. (10.) : in no *one* school is the use of it *maximized*.* In the *Chrestomathic* School, it *will* be maximized. But it is only in so far as it is performed with reference to a *verbal standard*—and *that* prescribed *in terminis*,—*literal* conformity to that standard being at the same time exacted,—that the process can be employed to the best advantage. In this case, the only danger is, *absence* of adequate *intellection* : but, against this danger, provision is here made by the *Organic Exercise principle*, No. (24.) and the *Note-taking principle*, No. (25.) In so far as application is made of the *Literal Conformity principle*, the function of *Scholar-Master* is capable of being exercised by any scholar, to whom the *verbal standard*, employed on the occasion, is *legible*. Hence, the more extended the application made of this *Literal Conformity principle*, the greater the extent, to which the *Scholar-Master principle*, No. (1.) is applicable with the most unquestionable *advantage*. Mr *Lancaster* seems to have been the first, if not the only person, to whom this advantage has presented itself in so strong and clear a point of view. Applied to *arithmetical* exercises, the *text* of the *verbal standard* is by him styled the *Key*. *Lanc. Improvements*, p. 84.

(24.) [*Organic Intellection Test principle.*] For the importance of *maximization* in this case, see No. (23.) While delineating the objects of the several *sciences*, with their concomitant and correspondent *arts*, the pupil, at the same time, makes *proof* of the *proficiency* he has attained in the *science*, and improves himself in the imitative *art*.

(25.) *Note-taking principle.*] By this *exercise*, no *art*, except that of *writing*, being practised, no such composite *proficiency* is produced, as in the case last mentioned. But in the character of a *test of intellection*, it is not only applicable, to an *extent*, to which, in respect to the magnitude of the *field of instruction*, there are no limits, but, wheresoever applied, it stands free from those *limitations* which apply to the *graphic* art. Even in the application to the *mechanical* part of the art of writing, it is not without its use ; being, though frequently at the expense of *beauty*, conducive to *despatch*. Being of so purely intellectual a nature—a species of extempore *composition*—it is among the *highest*, and, consequently, *latest*, exercises, which, under such a system as the present, can with propriety be exacted.

(26.) [*Self-service principle.*] This principle is, in its *nature*, the same with the *organic exercise* principle, No. (24.), but, in its *application*, extended to those operations, which, though themselves not belonging to the art in question, yet, being subservient and accessary preliminaries to the exercise of it, have been in use to be performed, by hands other than those of the Scholars themselves. *Examples* :—In the case of *writing*, *mending* the pen, *ruling* the paper ; in the case of *drawing*, *adjusting* the pencil, and other instruments employed. In ordinary schools, to save the trouble of teaching, these subservient operations are frequently performed by the *Master*, or his adult assistants. In the *Bell-Instruction* system, a point is made of including them in the system of instruction, and causing them to be learnt and performed by the *Scholars*, for themselves. But the expense produced by *spoilage*, during the teaching, is a counter-consideration, which must not be neglected. Here *instruction* and *pecuniary economy* are at variance ; and some how or other a compromise will be to be made.

(27.) [*Task Description principle.*] This principle may be considered as a particular application and exemplication of the one just mentioned. Those given under that former head belong to the class of *manual*, *this* to that of *vocal* exercises. By the practice of thus proclaiming, on the occasion of each fresh lesson, according to a prescribed rule, a description of the lesson last *said*, and of the lesson about to be *got*, one or both, reference being had to their respective places in the book from which they are both taken, the Scholar learns to fix his *conceptions* of the *objects* with which he has to do, and to give *clearness* to the *ideas* which he abstracts from them.

(28.) [*Tabular Exhibition principle.*] The all-comprehensive object is, *to maximize* the quantity of useful instruction, imbibed in this receptacle, during the allotted time. Towards the accomplishment of this object, by the aggregate of the several exercises, *mathetic* and *probative* taken together, everything is endeavoured to be done which can be done, every portion of time to be occupied which can be occupied, by the performance of *prescribed* exercises. Remain, however, some *fragments of time*, for the occupation of which no *prescribed* exercises can serve. These are, in the case of all the Scholars, the moments intervening between the *entrance* of each Scholar and the *commencement*

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of the process of instruction, and the moments intervening in like manner between *conclusion* and *departure*; and, in the case of the quickest conceptions, the moments intervening between the time *actually employed* in the getting of each lesson, and the end of the whole length of time *allotted* to the getting of it. Of the sum of all these moments is constituted the quantity of *free time*. During this time, the business is, so to order matters, as to afford the best *chance* at least, that, in the instance of each Scholar, this portion of *free time* shall spontaneously be filled up, by some *occupation*, that shall be conducive to the universal *end*. For this purpose the principle prescribes the following rule—

Rule.—Whatever part of the interior of the building is exposed to the view of the Scholars, keep it covered with *the matter of instruction*, in some shape or other: viz. in the shape of *verbal didactic discourse* in print, or *graphical imitations*, or, in some instances, the *things themselves*. At the very earliest stage, *biographical charts*, *historical charts*, and *maps*, will, in this way, be coming into use. Even at this stage, tabular views of the *fields* of some of the branches of learning, exhibiting their principal divisions—*Botany* and *Zoology*, in particular—may, with advantage, be kept in view: provided always, that every occasion be taken for illustrating the *verbal* description by *graphical* imitations.

(29.) [*Distraction preventing principle.*] Neither in respect of the quantity of *regulated time*, nor in respect of the quantity of *free time*, as above, will this design of useful occupation be carried into effect, any farther than all other *sensible objects*, such as, if admitted, would afford to the moment a more *attractive*, and thence a *distractive*, occupation, stand *excluded*. For this purpose, the principle affords the following Architectural *Rule*:—By height, or otherwise, so order the windows, that, so far as such exclusion can be made consistent with the admission of a sufficiency of light, no object, *exterior* to the building, shall be *visible* in any part of it occupied by the Scholars. To this rule, attention seems to have been not unfrequently paid in the construction of *School-rooms*.

(30.) *Apposite Classification Principle.*] If the class, in which the scholar is placed, is *not high enough* for his attainments, his advancement is not so rapid as it might be; and in this shape, in this instance, *perfection* fails of being attained; if *too high* for his attainments, the case is much *worse*. Whatever be the subsequent and more *advanced* train of instruction, to his possession of which this or that article of *antecedent* instruction, which he has failed of possessing himself of, is necessary, all this is so much *lost* to him; in respect of all this, he is, by this prematurity of advancement, condemned to remain in *ignorance*. Of the *Aggregate progress*, and *Comparative proficiency*, *registration principle*, Nos. (13.) and (14.) one good effect is, as hath been seen, the furnishing, in so far as the *evidence* so afforded is looked at and applied to the purpose, the most complete security against the opposite, but widely unequal mischiefs just described.

In an ordinary school, the *number* of the *classes* being generally *fixed*, and the *boundary lines* between *class* and *class* also fixed, (being determined by the nature of the *exercises*,) *removal* from a higher to a *lower* class is regarded as a serious *disgrace*: thence as a tremendous punishment; and consequently not employed, but under the notion of serious and obstinate *delinquency*. After a certain length of stay, *non-advancement* is considered nearly in the same light: fit or unfit, having learnt everything, or having learnt nothing, sooner or later, *every* scholar is accordingly advanced. This same bad effect—will it not therefore have place under the *new* system? No; because, under this system, the *hold* which each scholar has upon the *class*, which, but for the removal, he belongs to, is, from first to last, understood to be as *loose* as the hold, which, under the operation of the *place-capturing principle*, No. (10.) he has upon the *place*, which, for the same moment, he occupies in the class. Moreover, a scholar belongs to *as many classes*, at the same *time*, as there are different *branches* in which he receives instruction: *put back* in one, he may, at the same time, be *advanced* in another: and, at any rate, the idea of degradation,—utter and complete degradation,—is not produced by his being put back in any number of those branches, short of the *whole*.

(31.) *Short Lesson principle.*] The longer the *lesson* is, the longer must be the *time* allowed—allowed to all—for *getting* it, and the less strong the assurance that it will be gotten by that time. As, in a *fleet*, the pace of the slowest *vessel*, so in a class the pace of the dullest *scholar* is necessarily the pace of the *whole*. If the lesson be of such a length that, upon calculation, *an hour* is in that way requisite for the getting it, here is a whole hour, which, by any number of the scholars, may be consumed in *idleness*, and *that* before the deficiency is discovered. If the length be no more than *ten minutes*, (and this, under the *Bell Instruction* system, is the *maximum*,) thus much shorter is the *maximum* of *idleness* for that time: not that, under the sense of the, at any rate, so nearly approaching moment for *saying* the lesson—and *that* under the spur of the *place-capturing* principle, No. (10.)—a *yoke mate*, in the character either of *scholar tutor*, or *scholar tutor's pupil*, being all the time at the scholar's side,—any such *voluntary* inaction ever does or can take place. But, between the conclusion of the time *allotted* to *all alike*, for the getting of a lesson, and the time which, by the *quickest* minds, is actually *found* needful for the getting it, there will aways (see *Tabular Exhibition principle*,) No. (28.) be an interval not occupied in any *exercise*; and,

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upon reflection, it will be found that the magnitude of the *sum* of these *unoccupied intervals*, will naturally be, not *directly*, but *inversely*, as that of the *number* of the *lessons*. The *shorter* the lesson is, the easier it will be to ascertain, and thence to retrench, any *superfluity* in the quantity of the *time*, which may, in the *first* instance, have been *allotted* to it.

(32.) [*Simultaneous Action principle.*] For the use of the *promise*, see No. (17.) During the performance of the *probative* exercise, i. e. during the *saying* of the lesson, under the operation of the *place-capturing principle*, No. (10.) the *simultaneity* is the *necessary* effect of the *exercise:* while some *one* is employed in *saying* his part of his lesson, all the *rest* of the class are employed in *watching him*, for the purpose of making their advantage of his transgression.

(33.) [*Uninterrupted Action principle.*] During the whole of the school-time, the scholars are, all of them, employed, either in simply *mathetic*, in simply *probative*, or in *organic* (i. e. *mathetico-probative*) exercises—in *getting* lessons, *saying* lessons, or in *drawing* or *writing* the subjects of lessons. In passing from one such exercise to another, no *interval* worth mentioning need, or will take place: the *organic* exercise will be *performed*, and the *transition* from one exercise to another *effected*, under direction, given by *words of command*, as No. (34.) or *visible signals*, No. (35.)

(34.) [*Word of Command principle.*]

(35.) [*Visible Signal principle.*] The application of *words of command* to *school* instruction, appears to have been the invention, and that a highly useful one, of *Mr Lancaster*. [Bernard, p. 171.] As saving *noise*, the *visible* sort of signal, in so far as applicable, is manifestly preferable. It is only, however, by *audible*, and not by *visible* signs that, in such a situation, *perception* and *attention* can always be made sure of.

(36.) [*Needless Repetition prohibiting principle.*] Being obstructive of *despatch*, the imperfection thus designated, belongs to this place. In the character of a *memento*, the principle may serve as an *antagonist* to, and *check* upon, the *recapitulation principle*, No. (21.)

(37.) [*Memoriter Metre principle.*] In affording assistance to the *memory*, the use of *metre*,—whether (according to the nature of the language) with or without *rhyme*,—is pointed out by theory, and amply confirmed by experience. No *reason* can be assigned why this assistance should be refused to any branch of learning. The cause why as yet it has been confined to *language-learning*, and principally, if not exclusively, to the *dead* languages, is,—that, on the *revival of literature*, instruction being nearly confined to those, at that time, most instructive languages, the ingenious men, who, for the use of non-adult and *non-self-directing* minds, afforded their assistance to *language-learning*, were not in a situation to carry it any farther. But, according to the persuasion, by which the *present* plan has been governed, there exists not that branch of *useful intellectual learning*, which may not, with full as good effect as *language-learning*, be administered to the juvenile mind, long before its arrival at the *self-directing* state.

(38.) [*Employment varying principle.*] In proportion as exercises are varied, each affords relief, and operates as a sort of recreation or play, with relation to every other. In the Bell Instruction System, confined as in its application to art and science it has hitherto been, within such narrow limits, the indication of the advantage attached to such a diversification, might require to be held up to view in the way of Memento. Under any such extension as the one here proposed, it will take place of course.

(39.) [*Distinct Intonation principle.*]

(40.) [*Syllabic Lection principle.*]

(41.) [*Unreiterated Spelling principle.*]

(42.) [*Stammering—Repetition prohibiting principle.*] The names here ventured to be assigned to these several principles, will, it is hoped, contribute something, if not to the *conception*, to the *remembrance* at least of their import. For more particular explanation, room cannot be afforded here. By *Dr Bell's* works, not to mention those of his followers, no demand for it has been left. By *balbutient* is meant a species of *stammering*. Every such disorderly *repetition*, being considered as a *transgression*, is, of course, *punished* as such, and thus presently *corrected*, under the spur of the *place-capturing principle*, No. (10.)

(43.) [*Psammographic.*] From two Greek words, one of which signifies *sand*, the other *writing* or *belonging* to *writing*. The advantage attached to the use of *sand* consists, not merely in its *cheapness*, but also in the *facility* with which characters may be traced in it, at an age too *early* for the use either of *pen* or *pencil;* add the superior *magnitude* which may conveniently be given to the *characters*, and the *alacrity* produced by the comparative *freedom* which it affords to the feeble and as yet untaught hand. (See Bernard, p. 170.)

The *principles*, if such they may be called, belonging to this division, *Dr Bell* distinguishes from the rest by the less imposing name of *Practices*. *Inferior* to *all the other* principles, in one sense of the word, *extent*, viz. as designative of the *number* of the *branches* of *instruction* to which they are applicable, they are, in relation to *some* of those principles, *superior*, in a still more important sense of that same word, viz. as designative of the *number* of the *persons*, to whom the benefit of that instruction is capable of being imparted. The use of the word *principle* is, to serve as a common appellative, and thence as a common *bond of connexion*, for every *efficient cause*, by the operation of which, it is supposed, that the accomplishment of the *common end*,—*the communication*

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of useful intellectual instruction,—may be promoted. With the word *exercise* it is here connected, by exhibiting, in the character of a *principle*, the intention to employ, or bring to view as capable of being with advantage employed, as a *means* to that common end, this or that species of *exercise*: so many species of *exercise*, so many *principles*, over and above those which have no such immediate application to *exercises*. As to the *operations*, to which, as above, the common name of *practices* has been attached by *Dr Bell*, they seem to consist of certain improved *modes* of performing the sorts of *exercises*, by the performance of which, the arts of *pronunciation*, *reading*, and *writing* are acquired. If this be so, as many of these modes as are distinguishable from each other, so many correspondent articles may, in this way, be added to the catalogue of *principles*—*intellectual-instruction serving principles*.

In relation to several *particular* branches of *art* and *science*, several such *principles*, (chiefly consisting in the suggestion of as many *exercises*,) besides those of which intimation is given in the course of this Table, have, at different times, presented themselves to the author; and among them some, the expected utility of which has received confirmation from private trials. But the time (it seemed) was not yet arrived, in which they could, with propriety, be added to, and, as it were, put upon a level with, the contents of a whole *system of principles*, the utility of which has received such ample confirmation from experience.

APPENDIX.

No. I.

Chrestomathic Proposal: being a proposal for erecting by Subscription, and carrying on by the name of the Chrestomathic School, a Day-School for the extension of the new system to the higher branches of Instruction and ranks in life.

I. *Occasion of this Address.*

The matchless excellence, as well as novelty, of the *New Instruction System*, is a matter too universally recognised, to need mention in any other way than that of simple allusion. Of its applicability to the higher, not to say the highest, branches of intellectual instruction, the fullest persuasion is, over and over again, expressed in the works of its illustrious inventor, whose anticipations have, in every point, received such ample and undisputed confirmation from experience.

In common with so many others, the proposed conductors, or superintendents, undermentioned, had for a long time been entertaining the wish, not unaccompanied with the expectation, of seeing, in some mode or other, and by some means or other, so desirable an extension carried into effect; meaning, of course, on the ordinary *terms*, and by *professional* hands; and *that* too, in respect of the *extent* of the field of instruction, upon such a scale as would be suited to the efficiency of the *novum organum*, now placed within the reach of human industry, and the amplitude of the prospect opened by it to the public view.

Upon a more attentive consideration it appeared, however, to several of them, that, for a *first* experiment of this kind, more requisites were necessary, than could naturally be looked for in any single hand, or even in any number of hands uniting together upon any such ordinary ground; and of this conception the result has been an Association entered into by them for this purpose.

II. *Proposed Conductors,—Who.*

Not to speak of probity and pecuniary responsibility—qualities, of which, though both are so indisputably requisite, yet neither can, in such a case as the present, be spoken of as appropriate; a commanding acquaintance with the whole field of that intellectual instruction, the communication of which is the object of this design; a detailed acquaintance with the several distinguishable component elements and sources of public welfare (the great and universal end to which all *art*, all *science*, all *language*, is, or ought to be directed;) husbandry, manufactures, trades, money, and in particular with the practical details of trade as carried on in that vast metropolis, from which almost exclusively the destined partakers of the proposed benefit can, for some time, be expected: *all* these various endowments will at first view present themselves, if not as being in every instance indispensably necessary, at any rate as being eminently desirable. All these endowments, in common with the whole public in the most essential instances, and with an ample portion of it in every other instance, the Members of the Association, the proposed Conductors, had the satisfaction of seeing united in their whole body; a satisfaction which, upon inquiry, or without need of inquiry, an ample share will be received by every individual, who, either in the character of proposed patron of the institution, or parent, or guardian of a child to which the benefit of it is proposed, feels any interest in the design.

The person by whom, without the communi-

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cated desire of any one of them, and without the privity of any more than one, this paper has been drawn up and sent to the press, has not, nor can have, the honour of being of the number: he may, *therefore*, with the less difficulty and reserve, speak of the title, which on this occasion, and to this purpose they will, every one of them, be found to possess, to the requisite public confidence.

III. *Primary requisite, a SCHOOL-HOUSE: proposed to be built by Subscription.*

In the nature of the case, the first requisite, on which everything depends, and in the non-existence of which the chief cause of retardation may be found, is a *School-house*, an appropriate School-house, and *that*, in its dimensions, of an amplitude suited to that magnitude of scale on which, not only in respect to *cheapness* and *extent*, but in respect of *efficiency*, the *New Instruction System* so essentially depends.

For the attainment of this requisite, a pecuniary *advance*, and *that* to no inconsiderable amount, was obviously necessary; and for this purpose the proposed Conductors all presently agreed to become contributors, in such proportions as should be suited to their respective circumstances and convenience at the time of the commencement of the expense: an agreement which was the more readily entered into, by reason of the assurance they all saw reason to entertain, that whatever should be there bestowed would be no more than *an advance*, of which the reimbursement (which was all that by any of them has ever been looked for, or will be accepted,) might not unreasonably be depended upon, on condition of a few years patience.

It is for the completion of the sum requisite for this purpose that the present *proposal* is put into circulation.

IV. *Proposed Field and Plan of Instruction.*

This proposal has for its accompaniment a collection of papers, drawn up by a friend to the proposed Institution, who, though declining to take any part in the management, has in this manner, as well as by his contributions, manifested his desire to see it carried into effect.

These papers have for their general *title*, *Chrestomathiá;* and for their *design*, the giving a view of the field and means of Instruction, proposed for the proposed Chrestomathic Day-School.

Partly for the sake of compression, partly for the accommodation of any persons who may be disposed to look into it with attention, the main body of this Sketch is comprised in two Synoptic Tables, digested into the form of *Text* and *Notes*.

In Table I. the matter is arranged under the following general heads: viz. ADVANTAGES, from *Learning* as such, as well as from Learning in the *particular shapes* here in question; STAGES of INSTRUCTION; GROUNDS of PRIORITY, in relation to the branches herein included; and GROUNDS of OMISSION in relation to Branches *not* included.

In Table II., under the two following: viz.

I. PRINCIPLES constitutive of the *New Instruction System*, considered as applicable to the several ulterior Branches of *Art* and *Science*-Learning (*Language-learning* included.)

II. EXERCISES, by the performance of which, such learning is obtained or obtainable. In the instance of these *principles*, by means of the *simultaneousness* of the view, which, as above, is given of them, the connexions and dependencies of the several parts of the admirable whole, will, it is hoped, be the more readily observed, and correctly and completely comprehended.

On these considerations, in the instance of this last mentioned Table, (this happening to be the first of the two that was completed,) the whole matter, *Notes* as well as *Text*, was, in the first instance, brought together, and compressed into one side of a single sheet; and in this form copies, to a considerable number, have been printed off. Observations, however, having been made, that, while by the unavoidable closeness, added to the smallness, of the type, it could not but have been rendered afflictive to many an eye, it was by its still unavoidable bulk rendered in no inconsiderable degree unwieldy and formidable, another impression has since been printed off, in which the *Text* alone is in the *Tabular*-form, the accompanying *Notes* being in the ordinary *Book*-form; and in this manner alone—viz., *Text* in the *Tabular*, *Notes* in the *Book*-form—has Table I. been printed.

To the principal matter as contained in these two Tables, other papers are added in the form of an *Appendix*. The contents have for their object, partly a statement of some of the promises of ulterior success which are already known to have been furnished by experience,—partly a view of some ideas, which to the hope of *utility*, are supposed to add in some degree the character of *novelty*, and which, such as they are, the present design has been the means of calling forth.

V. *Site for School House secured.*

A requisite, the procurement of which might naturally have presented still greater difficulty, than any that is expected to attach upon the raising of the comparatively moderate sum necessary for the expense, was a *spot of ground*, sufficiently adapted, in respect of *situation* as well as *extent*, to the purpose of serving as a site for the erection. But this difficulty they have the satisfaction of declaring to be already removed.

VI. *Females proposed to be received,—Why?*

Their wish being as above, to give to so great a benefit, and *that* in every direction, the utmost extension in their power, the *female*

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sex could not fail of being comprehended in their views.

In the whole of the proposed field of instruction, as marked out in the above-mentioned paper, scarcely will there be found a spot, which in itself, custom apart, will not be, in respect of the information presented by it, alike useful to both sexes: some parts (and more especially those which concern *Domestic Economy*, and the care of health, as applied to the more delicate sex, and to both sexes, at the time of life during which they are almost exclusively subject to its care,) will even be found *more* useful to females than to males. By an experienced as well as eminently intelligent disciple of Dr Bell's,* it is mentioned as a "well-known fact, *that girls are more docile and attentive than boys;*" and that accordingly, in that part of their school-time, which remains after subtraction of that which is applied to occupations appropriated to their sex, the degree of proficiency which, at the end of the year, they have attained, is not inferior to that which, in the whole of that same school-time, has, within that same period, been attained by the boys.

In the case of the *middling* classes, to whatsoever other branches of instruction the labour of female children be applied, *needle-work* will certainly not be regarded as one that can be omitted; and though, for the practice of this art, there would remain several hours of the four-and-twenty, yet what may naturally be expected is, a general wish to see some portion of the *school-time* allotted to such works.

Dancing, Music.—By these fascinating words are presented two accomplishments, the possession of which will, by all that belong to the *higher* classes, be regarded as indispensable; and, by many of those that belong to the middling, as being, if not indispensable, at the least desirable. For neither of these, it is evident, can any place be found in the proposed school. For uniting its benefits with those accomplishments, there remain therefore but two expedients; viz. the deferring of the accomplishments, either to a later *hour*, or a later *age*.

VII. *Number proposed to be built for.*

Under the *National Institution*, the number built for in the *Westminster Free School* is observed to be 1000; viz. for males 600, for females 400. The same total, viz. a thousand, is, in case of a sufficiency of funds, the number here proposed to build for; in case of a deficiency, the number built for must of course be proportionably reduced.

As to expense, £5000, they observe to be stated as the expense of *that* building; furniture, as well as lodging, for Master and for Mistress included. That same sum, it is presumed, may be made to serve equally well for the here proposed school-house.

According to the indications afforded by experience, the above number of 600 is understood to be generally regarded as the greatest number that, in one and the same *school-room*, can be taught under the constant inspection of one and the same Master. But, on the plan on which it is here proposed to build, it will be evident, that, whatsoever be the dimensions of the apartment, in which that number can be sufficiently inspected by one person, several such apartments, containing, each of them, as much room as in *that* case, will in *this* case be inspectable by one and the same person, and *that* in a manner still more perfect than in that *other* case.

Moreover, in this same place, though no part of the room allotted to *females*, will, unless at some special *time*, or by special recorded order, and for special reason, be open to the view of any person stationed in the part allotted to *males*; yet, by means of a slight alteration, any *redundancy* in the quantity of room allotted to either sex may be applied to the supply of any *deficiency* which, in consequence of an increase beyond the calculated demand, may be found to have place in the quantity originally provided for the other.

Considering that, in the case of the Westminster Free School, a *thousand* was, in the judgment of the National Society, as large a number as it was advisable to build for; and *this*, although the class of scholars in view composed so much larger a portion of the juvenile population than that from which any scholars could be looked for to the proposed Day-School, a conclusion which may be liable to be drawn, is, that, in and for the here proposed School, no number so large, or nearly so large as the above, can reasonably be expected.

But, in the case of that *Free School*, free as it was and is, limits were set to the probable number of scholars, by several circumstances, none of which will, in the present instance, be found to have place. On the part of the parents, insensibility to the advantages of intellectual instruction, inattention to the future and lasting welfare of their children, inability to spare the time necessary to the conducting of the children, for the first part of the time, to and from the school, especially in the case of those whose abodes are in a considerable degree *distant* from it.

In the present instance, to obviate, as far as may be, the latter difficulty, an expedient, which the proposed Conductors have in view, is to comprise in *one* sitting the whole quantity of the school time; and by that means reduce to its *minimum* the time and attendance, consumed in the passage between school and home. In the Westminster Free School, the total quantity of school time,—in the season of longest light, *six* hours, in the season of shortest, light, *five*,—is divided into *two* portions, with an interval of one hour between the two. In

* Village School Improved, by J. Poole, M.A., 1818, p. 16.

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private schools, however, instances are not wanting, in which, without any interval, the children are kept under instruction for so long a time as six hours. To so great a length, the proposed Conductors are somewhat afraid to stretch it; but to such a length as *five* hours they expect not to find any conclusive objection.

One circumstance they look to, as a source, though not of *immediate*, yet in case of success, of *eventual*, increase to the population of the proposed school. Against any such undertaking as that of a *Boarding School*, to be carried on, or commenced, under *their own* management or even superintendence, their determination is decided. But, in case of success, a result, which they cannot regard as by any means an improbable one, is, that parents, situated at too great a distance to admit of their sending their children from their own residences, may, for the purpose of taking benefit of the instruction there, and there only, to be obtained, find for their children, in the residence of some relative or other particular friend, or even of some person who may be disposed to afford the accommodation on the ordinary commercial terms, a residence sufficiently near to the School-House to admit of their receiving the instruction which it affords. On this plan it is, that, to the great public schools, scholars are sent from the remotest parts of the three kingdoms: and, should it appear that, in the proposed new school, useful instruction in much greater variety, as well as quantity, is to be had, than in any of those old established ones, and that too in much less *time*, and by *every* scholar without exception, instead of by no more than a portion more or less considerable of the whole number, they see not why, in the present instance, an equal, if not superior afflux, may not sooner or later be expected.

A circle of about *two* miles radius, having the site of the school for its centre, is the space, from the whole of which, on condition of keeping the length of school-time undivided, they regard themselves as entitled to look for scholars; and *that* without any change made for this purpose in their place of residence.

VIII. *Ages, looked for, at Entrance and Departure.*

Fourteen is the age at or before which they hope to see their intended course completed, by the scholars in general, in all its branches; and this too, upon the supposition that *seven*, and no earlier, is the earliest age at which children will be sent to take the benefit of it; *fourteen*, that being the age at which it is common for *apprenticeships* to commence; for, though no such views are entertained, as that of confining the benefit to such children as their parents may have destined to apprenticeships, yet it would be altogether repugnant to their wishes, if any child so destined should, on any account, find himself excluded from it.

The *seven years*, reckoning from *seven* to *fourteen*, is the length of time, within which, as above, they expect to see the aggregate course completed; and, as a ground for that expectation, one of their endeavours has been to collect from the various education and intellectual-instruction establishments, in which instruction on any of the proposed subjects of the proposed scheme of instruction is administered, Public Schools, Universities, Hospitals, Public Institution-rooms, and Private Lecture-rooms not excluded—an account of the number of *hours* actually occupied in each; and this, to the end that the sum of the times so expended in all of them together, may be compared with the sum of the times capable of being allotted to the same subjects, in the proposed school; and though, of the information desired on this ground, the whole has not as yet been obtained, yet enough *has* been obtained to enable them, and with the requisite degree of confidence, considering the experienced force of the new instrument with which they will have to work, to speak of the above proposed length of time, as being fully sufficient, viz. for the aggregate of all the courses, according to the plan exhibited in the accompanying sketch; matters being, at the same time, as far as may be, so arranged, that, at several different stages, the scholar may take his departure, without leaving his instruction imperfect, in relation to any subject, in which he has begun to receive it.

When *seven years* was thus looked to as the probable duration of the aggregate course, the occupation had, however, for its basis the supposition that, at *that* age, in the situations in life in question, scholars might in general be found already in a sufficient degree instructed in those branches to which, in the free schools at present established, the *New Instruction* system is applied. But, consistently with that principle of universal comprehension, which they could not but adopt, no child whose parents, being desirous of obtaining for it a share in the benefit, were able and willing to pay for it at the necessary price, could, by the conditions of the undertaking, be excluded.

By this consideration it is, that they have been led to the persuasion which they entertain, of the necessity of comprising in their plan those arts of primary necessity and continual and universal application, (viz. reading and writing, and common arithmetic,) which are comprehended in the *New Instruction* system, in so far as already brought into practice. To this determination, an ample confirmation has been observed to be afforded by the observation made and repeatedly brought to view by Dr Bell himself (and which is no more than upon an attentive consideration of the case, might from the first have been previously expected,) viz., that in any of those arts, an imperfect degree of proficiency, obtained by instruction, administered in the ordinary mode, operates rather as an obstacle, than as a help

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to, an useful foundation, for instruction administered in this, incomparably more advantageous mode: *learning*, in the improved mode, having to an undefinable degree, for its necessary preliminary, the *unlearning* what has been learnt in the other ordinary, and ordinarily imperfect, mode.

Of one rule the necessity is, by the bare mention of it, rendered indisputable, and *that* is, not to admit or continue to receive any child who, whether on account of immaturity of age, or on any other, is so circumstanced as to require, in the school-room, more care and attendance than the quantity of each, which is at the command of the Establishment, can supply. As on so many other occasions, so on this, a rule which, while it thus bears on the face of it its own reason, and thereby its own explanation, is applicable with equal propriety to every individual case included in it, they cannot but regard as preferable to any rule, in which, by means of fixt and inflexible quantities, invariable provision is, in the *Procrustes* style, made for indefinitely varied exigencies.

In the *Barrington School* at *Durham*, at an age as early as *three* years, the *New Instruction System*, as is to be seen in the instructive and interesting account for which the public is indebted to *Sir Thomas Bernard*, has been found applicable with advantage;* and if, at an age still earlier, any child should be offered to the reading and writing form of the Chrestomathic School, there seems no reason why it should be rejected, on any other ground than that of an exclusion put upon it by the irrational rule just mentioned.

IX. *This but an Experiment—expected Sources of Continuance and Extension.*

The proposed undertaking being but an experiment, the period which the proposed Conductors look to, as that of the *completion* of the experiment, is the time at which the whole of the proposed field of instruction, as marked out in the *Chrestomathia*, shall have been travelled over, by the whole number of such of the scholars, as have gone through the aggregate course. At that time, if not earlier, the expectation of the proposed Conductors is, that such of them as are then alive, will have the satisfaction of beholding a number of fit persons willing, and in every respect well qualified, each of them by himself, to take the whole of the business out of their hands. Well may it be—and this was the very consideration by which the association was produced—well may it be, that, at present, any such undertaking is too great, considerably too great, for any single individual. Accordingly, the engaging in no inconsiderable number, as well as variety, a set of Masters, for the administering of the instruction in the several branches, is among the measures, the necessity of which is in full view.

But, at the period here in question, scholars, by dozens and by scores, may not unreasonably be expected to have *learnt*, in the Chrestomathic School, all the things whatsoever that will have there been *taught*. Viewing the matter at large, whatsoever it be, that a large number of persons have themselves *learnt*, supposing it well learnt, some proportion or other of the number will, by that same time, be not altogether unqualified to *teach*. But, at the period in question, under the New Instruction System, the scholars—no inconsiderable proportion of them—not only may reasonably be expected to be qualified to teach what they have learnt; but, during a length of time, more or less considerable, antecedent to that of their departure from the school, will *actually* have been employed in this same all-comprehensive work. At this time, if, in point of legal maturity of age, as well as in all other points, any one of them should be found competent to such an undertaking, so much the better. But even if, in respect of those requisites, the school should not happen to afford any individual who was, at that time, competent; yet, if so it were, that in point of intellectual maturity, as well as appropriate proficiency, any *one* such scholar should be found sufficient, the temporary legal deficiency might, as under the care of the already established Societies, find an adequate supply in the assistance of some trust-worthy friend.

X. *Terms of Contribution, &c.*

For the erection, fitting up, and furnishing of the School-house, with the necessary out-buildings and other out-works, the following are the terms and conditions on which the contributions of well-wishers are solicited:—

1. Contributions to be in shares of £10 each.
2. By any person any number of such shares may be subscribed for: several such shares are subscribed for by each of the above proposed Conductors.
3. For every such share, interest, at the rate of 5 per cent. shall eventually be allowed, as per Article 13.
4. Of the money, received as per Article 7, after defraying charges, as per Article 7, together with House expenses, and pay to Master, Mistress, and paid Teachers, the whole surplus, except such as shall be deemed necessary to be kept in hand for the contingencies of the year, shall, in the first month of every year, be invested in Government Securities, to serve as a sinking fund for the reimbursing to Subscribers, in equal proportions, the money respectively advanced by them: such reimbursements to be made, each time, by instalments of 10 per cent., so soon as the aggregate of the money so applicable shall have risen to that amount.
5. Any sum, of less amount than a share, will, if offered, be thankfully received: but, whether by itself, or added to the amount of a whole share, on no such additional sum will

* The Barrington School, London, 1813, p. 99.

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it be understood to be expected, that *interest*, or unless required at the time of the advance made, *reimbursement money* shall be paid.

6. Upon the amount of their respective contributions, the proposed Conductors of the Institution reserve to themselves, in the shape of interest and reimbursement money, the same advantages as, and no other than, those which, as per Articles 3 and 4, are promised to all other Contributors.

7. Of the School-money to be required, the exact amount cannot as yet be fixed. Four pounds is at present looked to as a *minimum*, *eight* as a maximum. The amount must, of course, be different, according as, in the terms of the undertaking, the expense of slates, pens, books, ink, paper, maps, charts, and other implements of instruction, together with the *hire* of such as need not, or cannot, be purchased, is or is not included. In general, parents would, it is presumed, be desirous of seeing themselves at a certainty, in regard to this and every other expense.

8. With or without subscribing for shares, another mode in which encouragement may be afforded is—by an engagement to send to the School, for and during a specified length of time, in the event of its being opened, one or more Scholars. In this way, with or without sending a child of his own, any person of opulence may, by engaging for the child of another, confer, at one and the same time, a public and a private benefit, at one and the same expense.

9. To afford to *Contributors*, and eventually to *Parents* and *Guardians*, the assurance, that the undertaking will not be hastily abandoned, —for the term of the first three years, to be computed from the time when the Parents or Guardians, of any number of scholars not less than fifty, shall have signed an engagement to pay, at such rate as shall at that time have been fixed, for and during such time as shall have been fixed, for the schooling of their respective children, the proposed Conductors engage, jointly and severally, to carry on the proposed School, and in case of loss, to charge themselves with such loss.

10. For this purpose, so soon as the School-house, with the appurtenances, shall be in readiness for the reception of scholars, notice of such readiness will be given by advertisements in the London daily papers. A space will be provided, in which, without interruption to the business, subscribers and parents of scholars, being recognised as such by recollection of their persons, or by transferable tickets, which will be given for that purpose, will have a perfect view of the whole business of the School as it is going on. If, from any persons at large, any admission-money be accepted, the amount will be no more than may be judged necessary to keep out noisomeness and mischievous wantonness; and will be applied to the use of the Institution, as above, Article 4.

11. Of all moneys received, and the disposition made of them, accounts will be published yearly, or oftener, and at any rate within the first week of each year, in some one or more of the London daily papers.

APPENDIX.—No. II.

Successful Application of the new System to Language-learning, in the case of the Great School, called the High School, Edinburgh: as reported in a Letter to Mr Fox, from James Pillans, Esq., Rector of that School. From the Report of the British and Foreign School Society, Anno* 1814, p. 57.

"You will not expect that I should detail the difficulties I encountered in establishing and applying the Monitorial System to the business of my class, nor the steps by which I have been rising, up to the present moment, from one degree of efficiency to another. To do so would extend my letter to an immoderate length; and though it might be interesting, and not unimproving to a person engaged in the same occupation, it would be a fitter subject for *vivâ voce* communication with him. Since I entered on my office, scarce a week has passed without suggesting some improvement in my arrangements, all tending to one point, viz. to stimulate and employ to purpose the various faculties of two hundred boys, differing widely both in acquirement and capacity; to insure attention, by excitements at once strong and honourable; and to exclude that languor and listlessness, arising partly from want of motive, and partly from the physical misery of being so long in a sitting posture, which most of us may remember to have been the great sources of the unhappiness we experienced at school.

"The branches of knowledge taught in my Class, the boys of which are in general somewhere between twelve and fourteen years old, are Latin, Greek, and Ancient, mixed with a little Modern Geography. The Greek and Geography are happy innovations of my predecessor; for the School, by its foundation, is entirely for Latin, and Dr Adam's introduction of elementary Greek in 1772 was violently opposed by no less a man than Dr Robertson the historian. I mention this circumstance, because it will account for the unreasonably

* In this School the number of the scholars has usually been between five hundred and six hundred. The School is divided into five classes: each class occupies a separate room. The head class, which is the most numerous, is under the immediate charge of the Head Master, styled *Rector*. To each of the others there is a separate *Master*, who is independent, or nearly so, of the *Rector*.

From one of these *Masters* an account not less encouraging, in relation to *his* class, will form the matter of the next article.

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small proportion of time given to these two important objects.

"In the *Latin* Class, which meets at nine every morning, consisting of very nearly two hundred boys, the general business of the day (subject to variation, according to the period of the season and progress of the pupils,) is as follows:—A portion of a Latin poet, from thirty-five to forty-five lines of Virgil, Horace, &c., and a nearly equal portion of Livy, Cicero, or Sallust, are to be parsed and translated: a portion of Dr Adam's Grammar, alternating daily with his Antiquities, is examined upon: these lessons have been all prescribed; that is, the last word mentioned, but no assistance given, the day before. The order of business is this: immediately after prayers at nine, the whole class forms into twenty divisions, under their respective Monitors, in the Great Hall, and the Cicero and Horace lessons are construed by the nine boys of each division; the duty of the Monitor being, 1. To take care that every boy shall construe a portion of the new lesson; 2. To see that his division understand the syntax and construction of the passage; 3. To take care that the right meaning be always given to the passage in all its parts; and, 4. To mark on a slip of paper the names of the boys who fail in saying. The Grammar lesson is also said to the Monitors. The boys of each division, on the other hand, are instructed to note any false interpretation which the Monitor may allow to pass, and reserve it for an *appeal* afterwards. When this construing and saying have been got through, the signal for removing into the Class-room being given, the Divisions, which have hitherto been arranged in the recesses of the windows of a large hall, move in regular and rapid order up stairs, and take their seats in the general Class, where, whatever is said, is addressed to all the boys. I then proceed to ask if there be any appeals, *i. e.* if there be any boys who think they can prove that the Monitor has allowed an erroneous translation to pass uncorrected in the Division. From four to a dozen boys generally rise in succession; and if they make good their point, they take place, each in his division, of those who have not observed the blunder, and the Monitor himself loses a place. This system binds both Monitor and pupil to careful preparation at home; the former, from the fear of detection and exposure by a boy far below him in the class; the latter, both by the infallible certainty of his being called on to say, and reported if he fail; and by the honourable desire of rising in the class, and proving that he knew the lesson better than the Monitor. Further advantage of the liberty of appeal is, that it generally brings forward into discussion the difficult passages (for it is these of course that are appealed upon;) and they being settled beforehand, a more perfect understanding of the lesson is secured, and the necessity of saying it over very frequently is avoided. Sometimes I vary this mode, by making the Monitors themselves, *i. e.* the twenty highest boys, construe one or both lessons, each to his own Division, who are all on the alert to detect a blunder, with a view of making an appeal. Whether the Monitor or Division is to construe, is always a secret till the moment before they begin, when I give out from the pulpit the order of business. After the appeals are concluded, the lessons are construed to me by boys whom I call at random, generally by some of those who have failed below stairs. These I know from the bills or slips of paper, which, by this time, are collected from each Monitor, strung on a wire, and subjected to my inspection. In this translation, questions are put by the Master on points of Geography, History, Antiquities, derivations of words, and niceties of construction and expression; and a freer and more elegant version is required. Every opportunity is also taken, suggested by the classical passages, to give useful information, and to insinuate moral and religious instruction. This, with the examination on Adam's Antiquities, which I always reserve for the general business, occupies the remaining time till eleven, when there is an interval of an hour, and is resumed from twelve till a quarter or twenty minutes past one, when the Divisions form to construe the lessons again, with this difference, that, instead of a literal, a free translation is expected; and all the information and illustrations, which have been given in the course of the day, are expected now to be forthcoming at the question of the Monitor, and the places depend upon their aptitude in answering. The *written exercises*, of which there are generally two per week, are of various kinds, chiefly translations from Latin into English, and from English into Latin, which are also examined and corrected by the Monitor, who makes his remarks, and adds his initials, that he may be responsible. The best and worst are shown up, and places determined accordingly. The exercises for the higher parts of the Class are Latin verses, occasionally English verses, Analyses or Abridgments of what authors they have read in the class, in English and in Latin, &c., and these are shown up to the Master directly, and corrected by him. Select passages of the classics are said by heart on Saturdays, to the Monitors in the first instance, that every boy may be called on, and they report the failures. In the business of the Division the Monitor has the power of putting a boy up or down, according to the figure he makes, always subject to an appeal from his decision to the Master, if the boy thinks himself aggrieved.

"The Greek class, according to the arrangement I found in the School, met only three hours a-week. I have lately contrived to assemble it an hour every day, except Saturday. The business here is more elementary, consisting of accurate saying by heart of a

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portion of Greek Grammar, and minute parsing of a short lesson in Dalzel's Analecta Minora. The more advanced part of the Class read Homer and Xenophon. In order to remedy the inconvenience of having so short a time for Greek, it is proposed, as a voluntary exercise to the higher boys, to read and show up every second Monday what are called Private Studies; that is, if a boy, after preparing all the lessons thoroughly, finds he has still some leisure time, he employs it in reading Homer without a translation, making out what he can; and what he cannot, marking as difficulties to be resolved. On the day appointed he mentions the number of lines he is ready to be examined on, and states his difficulties for solution, which is given either by the Master, or by some of his school-fellows who have conquered them. In this way, and with no other stimulus but having the number of lines read by each publicly mentioned, and obtaining an hour's play, there are boys now in the Class who are in the habit of showing up from nine hundred to twelve hundred lines within the fortnight.

"The Greek class consists of about one hundred and forty-five, and the lessons are said here too by Divisions. The Greek Monitors generally remain for twenty minutes at eleven; and it being then ascertained that they are masters of the lesson, they hear and report on their Divisions from two till half after two, when the lessons are heard up stairs, and the Monitors dismissed sometimes a little before three as a reward.

"The *Geography* class meets on Tuesdays and Thursdays at two o'clock. The course of instruction in this branch is, 1st, to give some illustrations of the general facts with regard to the Solar System; then to go over pretty rapidly the geography of the four quarters, taking merely the outlines; and, lastly, to descend to minute and particular descriptions of the countries bordering on the Mediterranean, from Gibraltar, by France, Italy, Greece, shores of the Baltic, Asia Minor, &c., back to the Straits: then the British Islands. Ancient and Modern Geography are united. A sketch or outline of each country is drawn by the Master on a black board with white chalk; the mountains are represented in green, and the rivers in blue. In this state the board is first presented to the pupils, and the Master, with a rod, explains the physical features of the country, points out and names the leading ranges of mountains, and the rivers that fall from them. The board as yet presenting so little detail, the eye, and the mind through the eye, readily takes in and retains the information. At this stage, also, the length, breadth, longitude, latitude, and boundaries are fixed. The next lesson presents the towns, (drawn thus ‡‡ in pink chalk,) which are to be found on the rivers already learned, descending from the source to the mouth. These towns are demonstrated by the Master in the same way, care being taken to mention at the time some striking facts respecting the situation, inhabitants, history, or neighbourhood of each, which may be associated with its name and position on the board. Having thus made out a sort of skeleton or frame-work of the country, by presenting, in striking relief, without those details which confound the eye in maps, the great *physical* features, the next object is to mark out in dotted lines the *artificial* divisions: and when these are well fixed, the remaining towns of importance, whose position is not indicated by rivers, are referred to the province or shire, and associated again with those already known. The situations of great battles are pointed out by a cross in red chalk. The object being to make a strong impression on the eye, and to set the imagination and conception to work, the chalks being of different colours is a circumstance not to be despised. When the board-draught is thus completed, maps are directed to be so constructed as to be as nearly as possible copies of it; that is, all the positions, &c. accurately laid down, but no names given. The drawer of the map must be quite *au fait* in naming every place in his own sketch; and if it be thought deserving of that honour, it is mounted on thick pasteboard, and hung up in view of his school-fellows. He is employed, too, as Monitor, to teach the geography of his own map to other boys who have either done worse maps, or none at all; and thus, in many ways, the information he has got is riveted in his memory. The book used for the Geography class is Dr Adam's Summary: but as, from its size and multifarious contents, it is better adapted for reference than committing to memory, I have printed for the use of the Class a few pages of Outlines, containing a mere list of names, arranged on the plan I have explained; and this being in their hands serves to recall the information conveyed."

APPENDIX.—No. III.

Successful Application of the New System of Instruction to Language-learning, in the case of one of the Classes of the High School, Edinburgh, as reported in a Letter from Mr James Gray, Master of the Class, to Edward Wakefield, Esq., 28th Dec. 1813.

"The following details will, I fear, be found uninteresting; but their results are so important, that I trust you will excuse a little dulness, while I endeavour to develop the plans of tuition lately adopted by some of the Masters of the High School, Edinburgh. It will be unnecessary to state, that the practices alluded to are founded on the system of Mr Lancaster, modelled according to the circumstances of our Seminary. The essential part

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of that gentleman's discovery is, I apprehend, that by which the more advanced or cleverer boys are employed in teaching or in assisting in their tasks their inferiors in years or in knowledge; and *this principle is acted upon here in its fullest extent.* Many misconceptions have gone abroad in regard to this celebrated plan, which it is of vital interest to have removed. 1. The first and most pernicious of these is, that it is only applicable where great numbers of the lower classes of children are to be taught by the same master, gratis, or at a low rate. 2. Another is, that where schools have been previously established, either by law, as the parochial schools of Scotland, or on a foundation, changes are not only unnecessary, but might be dangerous. It is besides unfortunate, that many schoolmasters seem to consider the Lancasterian system as an innovation, which they ought to regard with a jealous eye. Till these prejudices are eradicated from the minds of parents and teachers, the advantages derived from the plan will be partial and inconsiderable. In my opinion, many more beneficial consequences will result to the interests of education, from introducing it into the schools already existing, than from establishing new ones; for it is not to be dissembled, that evils have long existed that admit of no other cure. I shall take as short a view as possible of the practices in common use, contrasting them with the new. I ground my remarks on a full and impartial experiment; and in making them to you, I have no other view but the interests of the youth of my country. For many years past, these have been the subject of my nightly dreams and my daily meditations; to them I have more than once sacrificed my health, and even risked my life; and nothing shall deter me from speaking the truth.

"Suppose a class to consist of a *hundred* boys, which I shall take as the average number, though *in our school it is under the truth.* In the old way, one boy was called upon to repeat a small portion of the lesson, to whom all the rest were understood to be listening. Thus we proceeded, till every boy in the class, or as many as could be overtaken, were examined: and this plan would have answered well enough, had it been possible to fix the mind of every individual upon the same subject at the same moment; but such is the volatility of the youthful mind, that I have ever found this impracticable. You may confine the body to a seat; you may, perhaps, fix the eye to a book, but you can never be certain that it is not an unconscious gaze; and it is not unlikely, that while the boy ought to be mentally construing his lesson, his imagination is chasing a butterfly, or robbing a bird's nest. On this system I have experienced two unavoidable evils. 1. The one is, that the upper boys, who gain a knowledge of the lesson soon after they enter the school-room, cannot be kept still while the master is employed in teaching the under boys; and as example is contagious, the restlessness soon becomes universal. 2. The other is, that while the upper boys are construing, the under ones are generally trifling, and when the lesson comes round to them, are totally ignorant of it. They not unfrequently calculate upon the chance of escaping altogether, from the impossibility there is for any one man thoroughly to examine a hundred boys in two hours; for we never continue longer in school at any one time; and next meeting brings a new task. Thus both the upper and the under boys are injured. The one do not gain all the profit which they might from a more judicious management; the other make little or no progress, and, from the habitual neglect of their duty, contract a dislike both to their tasks and their teachers. In many cases it would be well if the evil ended here; for there is reason to fear, that the hours that ought to be employed in the acquisition of useful knowledge will be spent in habits dangerous to virtue; that indolence will shed its mildews over the blossoms of early talent, which may wither never to bloom again; or that the man will have to struggle hard to supply the deficiencies of the boy. I am far from saying that the evil is universal. According to the present system, many boys spring forward in the pursuit of knowledge, with an alacrity and success that is quite astonishing; but if, of an hundred boys, twenty fail in the object for which they are sent to the school, any scheme that might ensure their success ought to be eagerly embraced. This may be done effectually on the new system, by which I have been enabled so to arrange my class, that every boy is employed every minute of the time he is in school, either in the acquisition or communication of knowledge. The fifteen highest boys are monitors. The first thing to be done after the meeting of the class, is to see that they have their lessons distinctly. When this is ascertained, the whole class goes into divisions. In this way fifteen times as much work can be done in the same space, and, I can say with confidence, fifteen times better. From this contrivance, instead of the languor and restlessness that too frequently prevails, all is activity and energy. More noise, indeed, is heard; but the sounds are sweet, for they are the sounds of labour. Every one studies, because by the exertion of his talents, he finds himself equal to every task; and ignorance is more shameful, where the account is to be rendered to one of his own years, than to a man. It seems, indeed, that boys are better qualified to teach boys, than men: they enter more readily into their feelings; they are more sensible of the difficulties which they themselves have just mastered; and will adopt more simple and familiar modes of illustration. Nor have I ever had cause to suspect the diligence or fidelity of a monitor. To attain this station, is an object of rising ambition to the whole class: and where any one has risen to it, he

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is too much afraid of losing it, to risk the disgrace by his own misconduct. I have never once found it necessary to degrade a monitor for inattention to his division. To this there is a double check. An appeal is open to the division against the monitor, as well as to him against the division; and when every boy has gone over the whole, not a portion of the lesson, I examine a number of them promiscuously, and the lessons are said with so much more promptitude and accuracy than in the old way, that I am frequently enabled to examine as many as if no time had been spent in divisions at all. Thus I have united the advantages of both methods. By this means, every boy in the class, besides the benefit accruing from saying over the whole of every lesson till he has satisfied his *monitor*, is separately examined *by me* two or three times a-day. The superiority of this mode over the other is incalculable, as it tends to store the mind with useful knowledge, to infuse a love of learning, to form habits of industry, and to render the whole economy of a school delightful both to scholars and master. Of my present class, that has been conducted on this plan, all have gained a more extensive knowledge of the Latin language than I have known on any former occasion; and not a single boy has failed. This, till now, I did not think possible. For many years it had been a subject of melancholy reflection to me, why so many boys *failed in* acquiring a competent knowledge of *classical learning*, while they *succeeded in everything else*. This objection to our classical schools may now be easily obviated. I do not say that every boy will be *equally* successful. Nature has made strong and marked distinctions in the extent of capacity; but I will venture to assert, that every one may be made to turn his talents to the best account. One of the most important of the objects of a good education, is to inspire a literary taste; and I know no way in which this can be done so effectually. What deters many boys from the prosecution of ancient learning is its *difficulty*. By aid of the Lancasterian system, asperities may be smoothed, the boy may be gently led over the threshold of the temple; and when he is once introduced, he cannot fail to be charmed by its beauties. I have never, indeed, known a young man who pursued learning, that did not love it. This bias to literature is of more value than all the knowledge he earns from school. It is the shield of the young mind against the ruinous inroads of vice. In a school so regulated, it is impossible for any boy to spend his time idly. He must exert himself. He readily does what he finds he cannot escape; and what may have been irksome at first, soon becomes pleasant. He is happy, from a consciousness of doing his duty; and habits are formed, that will be useful through life. To the master, the task of superintending such a school is delightful. He is merely the helmsman that steers the bark, under perpetual sunshine, while every man on board is at his duty. Corporal punishments are abolished. This practice is equally degrading to the scholar who suffers, and to the master who inflicts punishment; and I firmly believe has done more mischief to our classical schools than all other causes whatever. The boy soon considers the man, whom he sees in the daily use of the torture, as a tyrant, and his greatest enemy; and all his ingenuity will be exerted in inventing the means of retaliation. A great objection to this mode of discipline is, that from its very nature the master applies to it with reluctance; and for one fault that is punished, twenty escape. Thus the hope of impunity begets disorder, which, when it comes to a certain height, in its turn brings punishment. On the new method, the boys are kept in constant good humour, and no irritation is ever excited in the mind of the master. There exists between them only a reciprocity of kindness and docility. To animate a whole school with one spirit, to make them advance in the intellectual career with the same march of mind, to stimulate them to exertion by the enlivening power of emulation, to exalt them in their own opinion, has always been my object in the discharge of my public duties; and Mr Lancaster has put into my hands an instrument, by which I have been enabled to realize my fondest visions in my most sanguine mood. This is a testimony that I think due, and I cannot withhold it.

I have the honour to be,
Dear Sir, yours faithfully,
JAMES GRAY."

APPENDIX.—No. IV.

ESSAY ON NOMENCLATURE AND CLASSIFICATION.*

Nomenclature of the main Branches of Art and Science—its Imperfections—with proposed Remedies. Systematic Table, prefixed by D'Alembert to the French Encyclopedia—its Imperfections—Specimen of a new one.

SECTION 1.

Plan of this Essay.

Deplorable it surely is, and, to a first view at least, not less extraordinary, that, for some of the most extensive, and most frequently mentioned, divisions of the field of Art and Science, even at so advanced a stage as that to which the human mind has already reached in its travels on that field, no tolerably expressive denominations should be to be found in the appropriate part of language.

Of language:—meaning, of course, the one which is here made use of; and which will

* For a list of the contents of the Sections, see the general contents of Chrestomathia at the commencement.

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not be denied to be one of the best cultivated languages which the present time affords; nor, in this particular, will the present state of any other language be found, it is believed, much more favourable.

That this unaptness has really place in the language, that real and practical inconveniences are among the actual results of it, and that, although not perhaps completely susceptible, it is, however, not altogether unsusceptible, of a remedy: such are the positions which it is the object of the following pages to present to view.

But, on the part of the intellectual subject or object in question—viz., the nomenclature of the aggregate body of the arts and sciences, in other words, the system of Encyclopedical nomenclature—this unaptness, in what does it consist?—Answer. In this: viz., that the nomenclature in question is not, either in the degree in which it is desirable that it should be, or in the degree in which it is capable of being made to be, subservient to those useful *purposes*, to which an instrument of this sort is capable of being rendered subservient.

In respect of any such useful purposes, to what immediate cause will any such failure, on the part of the subject in question, be to be attributed?—*Answer:* To its being deficient, in respect of one or more of those *properties*, which, ere it can be in a complete degree rendered subservient to those same useful purposes, it is necessary that it should possess.

In so far as, in any degree, it fails of being possessed of those same *properties*, and thereby of being capable of being rendered subservient to those same *purposes*, it will be found chargeable with certain correspondent imperfections, or points of imperfection.

To these several imperfections, if in the correspondent *purposes*, there be anything capable of entitling them to any such appellation as that of *useful*, it cannot but be desirable, that correspondent *remedies* should be applied. What then are they respectively, those *purposes*, those *properties*, those *imperfections*, and, if any such there be, those *remedies*? To find such answers as can be found, for this string of connected questions, is the object of the ensuing pages.

To a disquisition of this sort, inserted in such a work as the present, one very obvious objection presents itself. This is—that it is too abstract and abstruse; too logical; too metaphysical; or by whatever other epithet, for the purpose of condemnation, it may happen to it to be designated—too abstruse for the generality of readers, even of those by whom a course of education of the literary cast, carried on upon any of the customary plans, has been completed.

For this objection, however, an answer—which (it is hoped) will be found neither in point of fact incorrect, nor in point of argument irrelevant—is in equal readiness; at the conclusion of the Chrestomathic course, it will not be too abstruse for the comprehension of a Chrestomathic scholar.

What is there in it that, even to these striplings, should render it too abstruse? Is it the nature of the subject? Those parts excepted, which respectively regard general Ontology and Pneumatology—subjects, which for reasons already intimated, it has been found necessary to forbear including in the course—no one of all the subjects touched upon in it can be pointed out, which will not have been rendered altogether familiar to their view.

Is it then the language, from which, for giving expression to some of the leading ideas, words have been borrowed? Not to speak of its being the language constantly and universally drawn upon for such purposes, long before the scholars are arrived at this concluding stage, this same language will, in their eyes, have been stripped of all its terrors. Of those appellatives, for which *custom* has concurred with abstract convenience in resorting to a dead and foreign language, the interpretation will here be found all along subjoined; and in this very interpretation may the scholars, long before the conclusion of the course, have found matter for one of their *exercises*. True it is, that, as there has so often been occasion to observe, a *hard word*—a word belonging to a family of words, of which no other member is as yet known, constitutes, in every field over which it hangs, a *dark spot*; a spot, to which no eye, among those in which it excites the notion which that word is employed to express, can turn itself, without giving entrance to sentiments of humiliation and disgust. But, at the time in question, to the eye of a Chrestomathic scholar, in no part of the whole expanse of the field occupied by this sketch, will there be any such thing as a *dark spot*: to the original darkness, light will, in every instance, have been made to succeed.

Such is the objection, and such the answer. Here, however, if not before, comes another question: Of such an exhibition where is the *use*? But, to a question of this sort, in the present instance at least, the answer will obtain a much better chance for being satisfactory, if postponed till after the thing itself has been brought to view, concerning which it is asked, what is the use of it?

Section II.

Purposes *to which a denomination given to a branch of Art and Science may be applied*—viz., *Ordinary* and *Systematic*: Properties, desirable in it with a view to these purposes.

Ordinary and *Systematic*, applied to the purpose which, in the giving a denomination to a branch of art and science, has been in view, these adjuncts will, it is supposed, be found tolerably explanatory of themselves. *Ordinary* purpose, the presenting to view the contents of the particular branch which it denominates. *Systematic*, the purpose which is in

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view, where the denomination in question is one of a number of denominations, brought together in such manner as to exhibit to view certain *relations*, which the several branches so denominated, and thereby their respective contents, bear to each other: relations, for example, of *agreement* and *diversity*, or relations of *dependence*.

Accordingly, for the designation of the purpose, just described by the name of *the ordinary purpose*, the term *non-systematic* might, with equal propriety, be employed.

From the *purposes* to the accomplishment of which it is directed, follow the *properties* which it is desirable it should possess.

I. On the part of the denomination in question, for both the above-mentioned *purposes*, the two following *properties* may be stated as requisite.

1. Of the contents of the branch of art and sicence which it denominates, it should present to view—*to* the view of as many persons as possible—a conception as *clear*, *correct*, and *complete*, as by, and in the compass of, a single denomination,* can be afforded.

2. By this means, in relation to every less extensive branch of art and science that can be proposed, it should obviate the question—whether, within the compass of the more extensive, such less extensive branch is or is not included: it should obviate this question—i. e. in case of doubt, it should furnish the means of removing it, or, (what is better,) prevent the rise of any such doubts.

II. For the *systematic* purpose, the following is an additional property which presents itself as requisite.

It should (i. e. the denomination should) be so constructed, as, in and by its conjunction with other denominations, to display upon occasion, and *that* in as *clear*, *correct*, and *complete* a manner as possible, the several *relations* which it bears to the several other branches of art and science included in the same system: the *relations*, viz. in respect of *identity* of properties, on the part of the respectively contained particulars, on the one hand, and *diversity* of such properties on the other: that so, in the instance of every branch of art and science, comprehended in the system, it may, to the greatest extent possible, be apparent in what particulars they respectively agree with, and in what they differ from, each other.†

By these means, and by these alone—on these terms, and on these alone—is any conception that has been framed, delivered, received, or entertained of the whole system of arts and sciences, the whole *encyclopædical* system, as it is called, capable of being rendered a clear, correct, and complete one.

Thus, and in this way is shown, not only *identity*, in so far as identity, but *diversity*, in so far as diversity, has place. In this way, therefore, is performed, in regard to each branch of art and science, *that*, and more than *that*, which is performed by *algebra*, in regard to numbers. The wonders exhibited by that mysterious art, by what means is it that they are wrought? Only by showing, in each indi-

* (*Single denomination*). For both these purposes the thing to be wished for is—that, in so far as possible, the denomination should be comprised in the compass of a single word: viz. of course, a *noun substantive:* and this, not merely for shortness, but to avoid the embarrassment which has place, in so far as the appellation is a compound one, composed of two words or more. If, in addition to the noun substantive, there be but one other, that other will be a *noun adjective:* and, by this means, the denomination will be disabled from receiving without inconvenience any other adjunct; the place of the adjunct being already occupied by the adjective, which is one of the elements of the compound denomination thus composed. If it be composed of more than two, the inconvenience will be still greater: for in this case, all the words which enter into the composition of this long-winded substitute to a single substantive, will, in the texture of any sentence, of which that substantive would have constituted but one component part, be liable to be confounded with its other component words: in such sort that, in relation to each of them, it will be matter of difficulty—momentary difficulty at any rate—to determine, to which parcel of words it bears grammatical relation: viz. the sentence at large, in which the appellation, had it been a single-worded one, would have officiated in the character of a substantive, or the fragment of a sentence, composed of the words of this compound substitute to a proper substantive.

Such are the circumstances by which, to all purposes and on all occasions, this simplicity—this single-wordedness—is rendered desirable. But it is only on the occasion of ordinary discourse, that, as will soon be seen, the nature of the case admits of it. In the case of a *systematic table*, for the denomination of each branch, two words at least will be found requisite: one, to mark the *genus* to which the species in question belongs; the other, to give intimation of the *characters*, by which it stands distinguished from the *other species* of that *same genus*.

In what way it is that, as the number of subdivisions increases, the many-worded systematic name grows longer and longer, more and more complicated,—and an equipollent single-worded name more and more difficult to frame,—may be seen in the sample of an *Encyclopædical Diagram* or *Table*, § 8, and the explanation of it which follows, § 9: as likewise in the diagram, called the Porphyrian Tree, hereunto annexed.

† These relations of identity and diversity of properties—thence of *agreement* and *disagreement*—important as they are, are not the only ones which, in the present instance, are so. In a practical point of view, a set of relations, still more important, are relations of *connexion* or *dependence:* viz., those which have place, in so far as a person by whom this or that art is practised, or science studied, has, in respect thereof, need of an acquaintance, more or less intimate, with this or that other branch of art and science. Instances of this sort of relation may be seen in Table I. But of this sort of relation, between branch and branch, no indication, it may be seen, can in general be afforded by their respective names.

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vidual instance, the identity which has place, as between the import, conveyed at the outset by those *extraordinary* signs, which, as the instrument of its discoveries it employs, and some one or other of the always manifest imports, conveyed by those *ordinary* signs, of which common arithmetic makes use.

By the mutual lights, which these words are thus made to reflect upon the import of each other—by this means is, and by this means alone can be conveyed, in relation to the subject which they are employed to bring to view, the *maximum* of information: the greatest quantity of information capable of being brought to view, in and by the number of words thus employed:* the maximum of information in the minimum of space.

Section III.

Imperfections incident to a denomination of this sort: viz. 1. *Unexpressiveness;* 2. *Misexpressiveness.*

Correspondent to the *properties*, which it is desirable that a denomination attached to any branch of art and science should possess, are the *imperfections* of which it is susceptible. An imperfection will be imputable to it, in so far as, by failing to possess any one or more of the above-mentioned *properties*, it fails of being applicable with advantage to one or more of the above-mentioned *purposes*.

Imperfections, exhibited by this or that one, of the several denominations, considered by itself; imperfections, exhibited by the whole assemblage of them taken together, considered as a whole—to one or other of these heads will all such imperfections, it is believed, be found referable.

Unexpressiveness and *Misexpressiveness*—to one or other of these two heads, it is believed, will be found referable all such imperfections, of which any such denomination, taken singly, and considered by itself, will be found susceptible.

The *purposes*, to which it is desirable that a denomination of the sort in question should be capable of being made subservient, have just been brought to view: in so far as it simply fails of being subservient to those purposes, it is *unexpressive, simply* unexpressive.

Of the name, employed for the designation of any branch of art and science, the design and use is, to convey a conception, as correct and complete as by so narrow an instrument can be conveyed, of the *nature*, and, to that end, thereby of the *subject*, or *subject-matter*, of that same art and science: and this, in such sort as, when and as often as, in relation to any subject that happens to be proposed, a question shall arise, whether it does or does not belong to the branch in question, to suggest a true and clear answer, either on the affirmative or on the negative side.

If, instead of simply failing to convey any such instructive conception, it does indeed present a conception, but that conception altogether foreign to the subject, and thereby, in so far as it is actually entertained, erroneous and delusive, then it is, that, instead of being negatively and simply *unexpressive*, it is positively *misexpressive*.

Be the subject in its own nature what it may—and, on the other hand, the name applied to it, what any one will—true it is, that, in the course of time, the name, how completely unexpressive so ever, and even misexpressive, will become expressive.

To this observation no denial, or so much as doubt, can be opposed; and hence it is that, by names in the highest degree, not merely unexpressive but misexpressive, the functions of names are performed, the purposes which are in view in the use of names to a certain degree answered.

If the misexpressive name in question be a name, by which, when first brought to a man's view, the branch of art and science in question is presented—much more if it be the only name by which it is ever presented to him—on this supposition, a question (it must be confessed) altogether natural is, of this supposed original misexpressiveness, what, if any, is the inconvenience? At first mention (continues the argument) true it is, that the conception it presented was, by the supposition, an erroneous one: but moreover by another part of the supposition, the conception which has at the long run come to be conveyed by it, conveyed to the very person in question, is a correct one: for, by this name it is, that whatsoever conception he has cause to entertain of the subject, has been conveyed to him; and, in point of fact, by names originally as unexpressive as can easily be imagined, have conceptions no less correct than those which have been conveyed by the most expressive names, actually, as it will be easy to show, been conveyed.

Plausible as it is, to the objection opposed by this question, an answer, which it is believed will be found no less plain and clear, than decisive and satisfactory, presents itself.

1. In the first place, by the supposition, a length of time there is, during which, instead of the subject, of which it is desirable that it should convey the conception, the subject which it actually presents is a different one. So long as this state of things continues, every proposition, in the composition of which the misexpressive name in question has a place, is a self-contradictory one. So long then as this self-contradictoriness, and the confusion, of which it is essentially productive, continues, so long the inconvenience, nor is it an inconsiderable one, continues to be felt: and it is only after a lapse of time, more or less considerable, that, the new conception having at length in a manner

* For a more particular account of the uses of a systematic sketch of this sort, and more particularly of a systematic Table, see § 9, 10, 11 and 12.

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wormed out the original one, the inconvenience ceases to be felt.

2. In the next place, of the sort of name in question, another use, it has been already observed, is, to obviate doubts in relation to the *extent* of the field belonging to the branch of art and science in question: i. e. whether such or such a less extensive district, in whatsoever manner designated, especially if it be a newly discovered, or newly distinguished district, be included in it. In this case, by what rule or mark shall the answer be guided and determined? By the *name*, considered in itself, i. e. considered in its *original* import merely, no true light, but instead of it a false light, is afforded; and, as to the light afforded by mere usage, by the supposition, no light of this sort hath as yet begun to show itself.

Attached to the use made of misexpressive names, here then are two inconveniences; two distinguishable and undeniable inconveniences, which will be found to have place, in so far as, for the designation of any of the leading branches of art and science, any such improper and unfortunately chosen denominations continue to be employed.

Natural History, Natural Philosophy.—It will presently be seen, in how flagrant a degree both these denominations, both of them names, by which two *main* branches of art and science are wont to be designated, names in constant and almost universal use, are misexpressive.

By this imperfection, if any credit be to be given either to experience or to report, the amount of the inconvenience produced is by no means inconsiderable. Great is the length of time, during which it is not without extreme difficulty, nor till after great perplexity, that, in the mind of the beginner, especially if he be a very young beginner, the connexion between the misexpressive general name, and any of the particular matters meant to be designated by it; viz. the subordinate branches included under it, or any of the subjects appertaining respectively to those branches, can be formed.

So likewise as to the other inconveniences: to this likewise the like observation will be found applying with equal truth. This or that less extensive branch, is it to *Natural Philosophy* that it belongs, or to any, and what other more extensive head? No criterion, no source of guidance, being to be found in the name itself—viz., in its original import—mere *accident* determines. But in the instance of different persons, the determinations made by *accident* are different. Accordingly that less extensive branch, (*Chemistry* for example,) which in the view and language of some persons, *is* a branch of *Natural Philosophy*, in the view and language of other persons, is *not* a branch of it.

Thus it is that, the boundaries of the main compartments being indistinct, the conception entertained of the whole field of art and science is, in the instance of every mind, more or less inadequate, and either indeterminate or erroneous.

Thus much as to the imperfections, incident to the denomination of any branch of art and science, considered by itself. Now as to such imperfections, as do not apply but to the case, where the whole multitude of them, or a considerable part of that multitude, are collected together, and considered together, in the character of an aggregate.

As often as they are thus considered in conjunction and with reference to one another, the purpose for which they are thus considered may be termed a scientific, or *Encyclopedical* purpose; and with reference to this extraordinary purpose, all others may be distinguished by the appellation of *ordinary*.

In so far as it is to an *Encyclopedical* purpose that these several objects, the several branches of art and science, are considered, it is for the purpose of obtaining and communicating a view, as clear, correct, and complete as possible, of the whole field of *thought* and *action*, and therein of the whole field of *art* and *science*; and, to this purpose, a view of the several characters, i. e. characteristic circumstances, by which the several component branches of that ideal whole, are on the one hand assimilated to, on the other hand distinguished from, each other.

Learners and teachers (shall we say) or *Teachers and learners?* for, on the occasion of the mention now to be made of them, it seems not altogether easy to say, which of these two correspondent classes should be put foremost. Be this as it may, to the situation of both these two correspondent and contrasted classes it is, that in the framing of a sketch for the purpose in question, in a word, for the framing of *an Encyclopedical sketch*, the attention of the operator should be directed. As far as any separation can in practice be made, it is by the situation of *learners* that the principal demand for attention is presented: for all teachers must in the first place have been learners; nor, at any subsequent period can teachers exist without learners; whereas learners *may* exist, and, in so far as individuals are self-taught, *do* exist, without teachers; and, where both classes have place together, and at the same time remain distinct from one another, the class of *learners* may, and naturally will, be much more *numerous* than the class of *teachers*

Nor will the class of persons, to whom, in the character of *learners*, an apposite and expressive system of Encyclopedical nomenclature may be of use, be found to be so narrow as might at first sight be imagined. To any one, whose subsequent pursuits were destined to be confined within the limits of ever so narrow a branch of the field, if not the whole, various other parts of such a system will be found, of which a conception more or less detailed will not be found to be altogether useless. Of no one part can a man's conception fail of being the stronger and the clearer,

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the stronger and clearer his conception is of such or such other parts, which, by means of those properties, whereby they are respectively assimilated to it, and contrasted with it, contribute to reflect light upon it, and by this means place it in the clearer point of view.

To this class (to speak more particularly) will be seen to belong all those persons, by whom the benefit of the proposed system or course of Chrestomathic education will have been partaken of. With few if any exceptions, initiated, as they will be, in every useful branch of art and science,—strange would be the inconsistency, were any such determination taken, as that of forbearing to present to their view those relations of mutual agreement and distinction, by means of which these several branches receive each of them light from, and reflect it upon, every other. For, it is thus, and thus alone, that the mind can be endowed with, and rendered conscious of, that animating vigour, by means of which it feels itself able, with an assurance of success and mastery, to enter and operate with effect, upon any and every part of it, towards which the course of its pursuits may at any time happen to be directed.

But, on the proposed plan, along with the class of *learners* will be augmented the class of *teachers:* and *that* in a much larger proportion, than any which till of late has been in view. For, in the instance of every one of the branches of science thus taught, so it is that, by a very considerable proportion of the class of *learners*, the function of *teachers* will, even before their own term of learning is in respect of that same branch fully expired, be taken in hand and exercised: so that, to the extent of this large portion of the whole number of learners, the only line of separation between the two classes, is that which will have been drawn by the hand of *Time*.

Of the imperfections, of which a system of nomenclature for the various branches of art and science may be seen to be susceptible, when considered with a view to none but the *ordinary purposes*, as above explained, a conception may presently be formed, and has accordingly been already endeavoured to be conveyed. But, of the imperfections, of which the like system may be seen to be susceptible, when considered with reference to *Encyclopedical purposes*, as above explained,—no conception can be formed, till a conception has been formed of the particular form, which it is necessary a system of this sort should be made to wear, in order to possess—and *that* in the highest possible degree of perfection—those properties, a general intimation of which has just been given: viz. that in which, in relation to each branch, are brought to view the circumstances, in respect of which it *agrees* with, and those in respect of which it *disagrees* with, every other.

Of a system of this sort will here be given a general idea; and that followed by an exemplification, which, though particular, will be a very extensive one,—not embracing merely, but outstretching, the whole of the proposed field of Chrestomathic education. But, in the meantime, that the nature and existence of the demand, for a reform of some sort, in the nomenclature employed upon the subject, may be the more distinctly perceptible,—an exemplification will be given of its inaptitude, even with reference to the purposes, above distinguished by the name of *ordinary* purposes:—viz. in the instance of those names which are in most frequent use.

Section IV.

Inaptness of the appellatives Natural History, Natural Philosophy, *and* Mathematics.

1. The branch of art and science for the designation of which the compound appellation *Natural History* is as yet the only one in use, is that which has for its subject *matter*, in general, including bodies of all sorts, considered in respect of those modifications, which are found exemplified by it, before any operation has been performed upon it by human *art*, under the direction of human *science:** or in other words, (if, for familiarity's sake, notwithstanding the unapt floridness of the expression, it should be deemed advisable to employ, as usual, the name of the well-known fictitious personage, *Nature*,) in the condition in which it has been found placed by the hands of *Nature*—uncontrolled and unassisted Nature.

Of these bodies—i. e. of *matter*, in all such of its forms with which we have in any way or degree any acquaintance,—the aggregate is composed in the first place of our *Earth*, in the next place of all the other bodies, of which our *World* is composed: of our Earth in the first place, no others being of any importance to us, otherwise than with reference to that, "in which we live, and move, and have our being."

Of this earth of our's, the matter is either in the form of matter altogether *lifeless;* matter endowed with life, but *without feeling;* or matter endowed with *life and feeling* both. In and by the several appellatives, *Mineralogy*, *Botany*, and *Zoology*, all of them single-worded—all of them in familiar use,—the primary divisions of the branch of art and science here in question, are aptly enough expressed. And if, for the designation of that remaining branch of the art and science in question, which has for its subject the remainder of those modifications of matter with which we have any acquaintance, the term *Uranology*, as above, † or even the term *Astronomy*, be employed,—in either case, to the nomenclature thus bestowed

* See Table I. Note 32, supra, p. 36.

† See Table I. Stage V. Notes 87, 88, supra, p. 38.

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upon these primary branches of the stock of art and science in question, no considerable objection presents itself as opposable.

Not so in the case of the whole aggregate, of which these are the divisions. Of the two words,—the first an adjective, the other a substantive,—of which the compound appellation *Natural History* is formed,—it found, at the time of its formation, the substantive *History* already appropriated to the designation of a branch of learning, having for its subject those *states of persons and things* of all sorts, and those *events* of all sorts, that have been known or supposed to have had place in times *past*: present time either being altogether excluded, or its history being but as it were a point, in comparison with the time of history which it closes. Adding the word *natural*, say *Natural History*, the result is, that, for the import, designated by this appellative, antecedently to the establishment of that usage from which it has received an import so widely different, *we have this*, viz. the *natural* account of those *states of persons and things*, and so forth, and of those *events*, and so forth, which had place in times past.

Now, with what propriety, to any one of the above-mentioned so aptly denominated divisions, of the branch of art and science itself thus unaptly denominated,—with what propriety, to Mineralogy, to Botany, to Zoology,—can the term *Natural History*, consideration had of its original and proper import as thus developed, be applied?

II. The branch of art and science, for the designation of which the compound appellation *Natural Philosophy* is in use, is that which has, for its *subject*, *matter* in general, considered in respect of such modifications as it has been made, or may be expected to be made, to undergo, by human *art*, under the guidance of human *science*: with the addition, perhaps, of such properties, as, by means of changes made in it by the application of that same mental instrument, have been discovered to have been already belonging to it.

Taken by itself, *Philosophy* is *the love of wisdom*. Adding the word *natural*, say *Natural Philosophy*, and, for the import designated by this appellation, antecedently to the arbitrary usage, established in this case as in that other,—we have *this*, viz. *the natural love of wisdom*.

That either in the study of *Mechanics*, or in that of *Chemistry*, or in the study of any of those *particular* branches of art and science, which are formed by the application of these *general* and *theoretical* branches to the various *practical* ones to which they are subservient, is there any want of capacity to afford gratification to an affection so laudable as that of *the love of wisdom*,—is not here by any means meant to be asserted, or so much as insinuated. But, not to speak of *Oratory*, *Poetry*, or any of the *Fine Arts*,—in the study of the art and science of *Legislation*, or in the study of the art and science of which *Private Morals* is the subject, is there any less room for the manifestation of the *love of wisdom*, or of *wisdom* itself, than in the study of *machines*, or in that of the various methods of compounding, decompounding, and recompounding, the matter, of which *stones*, *plants*, and *animals*, are respectively composed?

III. The branch of art and science, for the designation of which the term *Mathematics* is in use, is that which has for its subject *quantity* in general, considered with or without relation to *form* or *figure*: quantity in general, that is to say, as well *matter* as *void space*, they being considered respectively in relation to *quantity*, with or without relation to *figure*: *void space*—that is, space considered as void, or rather without consideration had of its contents: for, as to any determinate portion of space, determined by determinate boundaries,—and, within those boundaries not containing any the least particle of matter whatsoever,—an example of any such object would not, it is believed, be very easy to find.

Taken in its original import, *Mathematics* denotes anything that is *learnt*, or considered as capable of being learnt. It therefore *is*—or at least in that its original import *was*, capable of being, with no less propriety, employed in the designation of any one of those existing, or those about to exist, branches of art and science, comprehended or not, in the most comprehensive and copious Encyclopedia,—than in the designation of the particular branch, to which, by long and learned usage, it has thus, in these later times, become appropriated:—of the art of *legislation*, or the art of *push-pin*, no less than of *Geometry* and *Algebra*.

Upon all the above-mentioned three denominations, will not only the imperfection of *inexpressiveness*, but, in the instance of the two first of them, that of *misexpressiveness*, be found chargeable.

Running on in perpetual contradiction to the original import, a false account of the subject is the account, which the two appellations, *Natural Philosophy* and *Mathematics*, are, both of them, continually giving of it.

But, though in all these instances the proposition involved in the appellative is equally false, yet the falsehood so involved is not, in all these instances, equally pregnant with practical inconvenience.

In the instance of *Mathematics*, no very considerable practical inconvenience seems observable.

To such persons as are altogether unacquainted with the primary *general* import of the word, it conveys not any import at variance with that which, in the instance in question, it has acquired from *particular* usage; and, even to the eyes of persons acquainted with such its primary import, that *general* import

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has to such a degree been covered as it were, and by degrees even pushed aside, by the *particular* import attached to it by particular *usage*, as to be scarcely ever in use to present itself.

In the case of *Natural Philosophy*, the inconvenient effects of *unexpressiveness*, coupled as it is with *misexpressiveness*, have manifested themselves in a manner much more conspicuous and incontestable. To the same branch of art and science to which some attach the name of *Natural Philosophy*, others attach the name of *Experimental Philosophy*. In the present instance, both these terms being, as above, misapplied, are they—in the modern import of the former of them,—are they, or are they not, synonymous with each other? In relation to the *subject* to which they respectively apply, no intimation being given by either of these appellatives,—this being the case, to a question to the above effect, who shall undertake to furnish an answer?—thus much being pretty clear, viz., that for no such answer are any *data* afforded by the primary import of either of these appellatives.

Astronomy—though, properly speaking, it should in part be considered as referable to *Natural History* (viz., in so far as it consists in simple *observations*, unaccompanied with those observations and *calculations*, which, as in the case of *Chronological Geography* and *Uranological Chronology*,* are applicable, and actually applied, to practical use,) seems commonly to be considered as referable to *Natural Philosophy*, and to that alone. Be it so; but is it then referable to *Experimental Philosophy*? The *light* that issues from them, yes; but the *stars* themselves, are *they*, like the *star-fish* named from them, are they taken, can they be taken, for the subjects of *experiment*?

Chemistry, this branch of art and science does it, or does it not, belong to the domain of *Natural Philosophy*? Yes, say some; for, under that appellation they include it. *No*, say others; for, under that appellation *they* do not include it.

Belonging, or not belonging, to *Natural Philosophy*, does it not at any rate belong to *Experimental Philosophy*? In the whole of *Chemistry*, not to say any more, taken from beginning to end, is not there full as much of experiment as in any part of *Mechanics*?

Once more, does it, or does it not, belong to *Natural Philosophy*? On any such ground as that of *reason* and *analogy*, the question is manifestly unanswerable, and any dispute produced by it interminable. Why? Because, while one of these names—viz., *Natural Philosophy*, is not only *unexpressive* but *misexpressive*, the other, *Chemistry*, is also unexpressive. By *Chemistry*—an Arabian word, of which the origin has always been covered by a cloud—no intimation whatever, either of the *subject-matter*, of the sort of *operator*, or of the nature of any *operations* performed, is afforded.

By some Institutionalists, *Chemistry*, as above observed, is *not* considered as included in *Natural Philosophy*. Why? Because, before *Chemistry* had begun to find *teachers*, before any more than a few scattered fragments of the art and science could be so much as said to have existence, *Natural Philosophy* had, for a long time, been in use to be taught. Therefore, when *Chemistry* came to be taught, this new branch was considered as a branch of *art* or *science*, wholly distinct and independent, not included in that old one.

Section V.

Cause or Origin of this Inaptitude.

Of the thus extensively prevailing inadequacy, should the *source* be asked for, it may be found, it is believed, at no great depth beneath the surface. It may be descried in the difference between the respective extents of the several divisions of the field of art and science, —*i. e.*, of the respective masses of their contents,—in the state in which they *now* present themselves to view, as compared with the extents respectively possessed by them when, for the first time, the degree of cultivation, which they had respectively received, suggested the convenience of employing a certain name, for the purpose of binding together in the mind such of their contents, with which at that time an acquaintance, more or less correct and extensive, had been formed. In each instance, numerous, insulated, and dispersed, must have been the particular observations and experiments made, before it occurred to any one to give to the aggregate assemblage of them a common name of any kind, and thus to bind together the contents of that aggregate by one common tie. Even when this instrument of connexion and elucidation came at length to be employed, it would at first be either altogether uncharacteristic of the objects which it served to designate, or, if amongst them there were any, at all, to which it bore any such natural relation, the number of them would, in comparison with the number of those to which it bore not any such relation, be very small.

Take, for instance, that branch of art and science which still bears the name of *Electricity*. Of the word *Electricity*, the root or basis is a Greek word, which signifies *amber*: had it been from the Latin that the word had been derived, it would have been *Amberism*. Why *Electricity* or *Amberism*? Only because, of such a multitude of sorts of substances as that by which, at present, upon the subjecting them to the same sort of operation (viz., rubbing,) the same appearances (viz., the causing light bodies first to move towards them, and then to recede from them) are exhibited, *amber* happened to be the first, in which the existence of this property was observed.

Even *Magnetism*, though to the purpose of

* See Table I.

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calling to view, by means of its original signification, the phenomena, for the designation of which it has now for a long time been employed,—though to this purpose it is so much less inadequate than *Electricity*, has had its original boundaries far outstretched by observations made at various later dates. By the import originally attached to it, the intimation given is, that the properties, of which it takes cognizance, belong exclusively to the *naturally* existing mineral, termed, in Greek and Latin, *Magnes*, and, in English, *the Loadstone*.

Since those days the same properties have, however, been found to be capable of being given to *iron*,—a simple metallic substance, which is but one of two or more ingredients of which the loadstone is composed,—and to belong naturally to *nickel*, another metallic substance, which, with the exception of this property, and those that are common to all metals, has not been found to have anything in common with either of those two other substances.

In the instance of these two branches of art and science—both of them included in the domain so unexpressively denominated by the compound appellative *Natural Philosophy*—we have two names, which, however imperfectly, are still in a certain degree characteristic and expressive; designative of a portion, though not of the whole, of the contents of the branch of art and science which they are respectively employed to denominate. In the instance of *Galvanism*, the sign is altogether uncharacteristic, with relation to every one of the objects which it is employed to signify. By an Italian of the name of *Galvani*, within the memory of multitudes now living, observation was made of certain phenomena, in which no analogy to any other class of phenomena was for some time discovered. No other object, to which they could be said to bear any particular relation, being known,—at the same time that the person, by whose sagacity and ingenuity they had been in part observed, and in part discovered, being known,—it was from him they took their name. *The phenomena observed or discovered by Galvani*, and presently, for shortness, *Galvanism*, was the name given to them by the Natural Philosophers of that day.

This imperfection is not peculiar to the *physical* branch of art and science:—in a large proportion it is shared with it by the *ethical*.

From like causes proceed everywhere like effects. Hence, in the field of Government, the multitude of *Offices*, by the names of which not any the slightest intimation is conveyed of the nature of the operations performed by the possessors.*

* Take, for instance, the Offices respectively designated by the names *Chancellor*, *Secretary of the Petty Bag*, *Clerk of the Pells*, *Clerk of the Hanaper*, *Clerk of the Pipe*, *Surveyor of the Green Wax*,

Section VI.

Course to be taken for framing the most perfect and instructive System of Encyclopedical Nomenclature that the Nature of the Case admits of.

The nature of the *subjects* themselves, and the nature of the *words* or *terms* employed in giving to the aggregate mass of them, in all its diversifications, a system of *nomenclature*, and, by means of such nomenclature, a set of *divisions*, and thereby a scheme of distribution and arrangement—on these two circumstances, it is believed, will the aptitude of the work, with reference to its purposes, be found to depend.

I. As to the *subject*, for the particular purpose here in question, it is only in so far as concerns its primary and most extensive divisions, that an acquaintance with it will be found to be very material: with its details no other acquaintance will be found necessary, than that, by the want of which a man might be led into misconceptions concerning the general nature of the compartments and divisions in which they are comprehended: viz. in such sort, as, by means of some ill-chosen appellative, to ascribe to this or that one of the contents, this or that property, of which in reality it is not possessed.

In the choice made of the *words*, will be found to be included, two intimately connected indeed, but perfectly distinguishable particulars: viz. in the first place, the choice of such appellatives—single-worded and many-worded together—as, by the *extent* respectively belonging to them, shall be suited to the purpose of giving expression to all such divisions or parts of the subject, or aggregate, as, at each step in the progress of the division, shall be proposed to be marked out; in the next place, the *tongue* or *language*, of which choice shall have been made, for the furnishing the assortment of words required for the supply of that demand.

1. As to the *extent* covered by the respective appellatives, it will, in the ensuing sketch at least, for all but the last step taken in the course, be such as, when they are arranged one after another, in appropriate order, will be seen to give to the mode or scheme of division marked out by them, the character of an *exhaustive* one, and *that*, in respect of the number of the parts produced by each act of ideal division of the aggregate, considered for that purpose as a divisible whole,—the sort of scheme, which has been styled sometimes, from the Greek, *dichotomous;* sometimes, from the Latin, *bifurcate;* literally rendered in English by the word *two-pronged*, as applied to a *fork:* for, as will be seen, it is in and by this mode, and this alone, that all the purposes, which, on this occasion are of a nature to afford a practical use, can be accomplished. As to the considerations by which the choice made in

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favour of this mode was produced, a view of them will presently be given: but, that they may be the more clearly apprehended, it has been deemed advisable to bring to view, in the first instance, an exemplification of the sort of work to which they will have to make reference.*

Small, it is true, is the number of steps to which, accompanied with a correspondent system of nomenclature, this transcendently instructive and useful scheme of division can, consistently with any net balance on the side of advantage, be pursued: the number of words being so great, and not only the labour necessary to the forming of such a system, but even the labour of following it up when made, being such, as, after a comparatively small number of steps taken in this career, to threaten to become intolerable. But, against the carrying it on to whatever length it is capable of being followed up to with clear advantage, every impracticability, that may be found to attach upon an ulterior pursuit of it, will not be found to oppose any reasonable objection: and a task, for which neither the mind of the writer, nor the mind of the reader, may be ripe at one period, may find both minds sufficiently prepared for it, at a more advanced point in the line of time.

As to the *language*, the *Greek* presents itself as being, upon the whole, beyond comparison, the best adapted to this purpose: and this so clearly, as to be the only one which, on this occasion, there can be any use in holding up to view.

Reason and *Custom*—*Reason*, in this instance, the parent of *Custom*—join in the affording of this assurance. Of all known languages, the Greek is assuredly, in its structure, the most plastic and most manageable. To such a purpose as the present, upon a scale of any extent, it is the only language which it has been customary for men to draw upon for this purpose: customary, not only in the English language, but in the language of every other nation forming a part of the European system: or, in a word, as, to this purpose, may be said for shortness, and without any very material injustice, in the language of every well-instructed nation upon earth.

Of the sort of work proposed to be executed, the *subject* has already been brought to view, and its limits marked out, it is hoped, with that degree of precision which the nature of the case admits of: viz. of the whole field of *thought and action*, that part which constitutes the field of *art and science*: the *field* itself, or, what comes to the same thing, (both expressions being necessarily *figurative*, names of *fictitious entities*,) the aggregate of its *contents*.†

Of the *division* to be made of this *field*, or, (what comes to the same thing,) the *distribution* to be made of its *contents*, where shall we look for the *source*?—the primary source, by the choice of which the choice of all ult sources, should any such be added, will n rally be influenced at least, if not determi Where, but in the different natures of diff *parts* of this *field*—of different portions o *contents*?—in a word, in the nature of the *ject*—the common *subject* of all these bran of *art* and *science*—and in the different na of the several different parts of that sub on which these several branches have to rate? So far as it is from this source tha division is made—the *principle of divisio* duced—correspondent to each branch of *subject* is the branch of *art* and *scienc* which it is operated upon: and, conver correspondent to each branch of *art* and *sc* is that branch of the *subject* on which it oper

In the preface, written by D'Alembert, prefixed to the French Encyclopædia, u the title of *Systême figuré des Connoiss Humaines*—*Figured System of Human K ledge*,‡ a systematic Table or Map is g accompanied with a paper, entitled, *Esp tion détaillée du Systême des Connoissances maines*.

In that sketch, what is the declared su of the work?—Art and Science in conj tion?—No: but *sciences* alone, to the exclu of arts; for surely, under the French *connoissances*, *arts* are no more included under the English word *knowledge*, or English word *science*. Yet in the Table the words *Art* and *Arts* occur in many pla

Again, the *source* of division, or, to b with the first division which presents itse the source of that leading division—wha it? Is it the nature of *the subject*—the di ent natures of the several different bran of the subject—on which the correspon branches of art and science have to oper —No: but the nature of the *faculties*, means of which the subject, in its diff parts, is (it is supposed) operated upon.

Lastly, the plan or *scheme of division*,— sidered in respect of the number of bran which are respectively the results of the s ral successive acts of *partition* or *distribu* performed upon it,—what is it? Is it above proposed, *regular* and *bifurcate*? number, at the first step, two, and at e step the same?—No: but at the first step *furcate*: and, after that, the number at step varying, to the number of half-a-doz more.

Such is the scheme, or plan of division, sued in that justly celebrated work: in t may be seen a part, and but a part, of whole number of its incongruities: and some of the practical *inconveniences* resul from some of these *logical* incongruities, on the ground of science, *confusion*, and on one part *misrepresentation*, and on the o

* See § 8. † See Table I. note (32.)

* *Knowledges* would be the word, if, in En as in French, the substantive *knowledge* had a p number.

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IMAGINATION.

NARRATIVE.	POËME EPIQUE. MADRIGAL. ÉPIGRAMME. ROMAN, &c.	MUSIQUE.....	Théorique. Pratique. Instrumentale. Vocale.
		PEINTURE.	
		SCULPTURE.	
DRAMATIQUE.	TRAGEDIE. COMEDIE. OPERA. PASTORALES, &c.	ARCHITECTURE CIVILE.	
		GRAVURE.	
ARABOLIQUE.	ALLEGORIES.		

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part *misconception*, belong to the category of inconvenience,—it will be the endeavour of the next section to give a view.

Section VII.

D'Alembert's Encyclopedical Map or Tabular Sketch—its Imperfections.*

Of the sketch given by *D'Alembert*, the leading principles are—as he himself has been careful to declare, taken from that given by *Lord Bacon*. Had it been entirely his own, it would have been, beyond comparison, a better one. For the age of *Bacon*, Bacon's was a precocious and precious fruit of the union of learning with genius: for the age of *D'Alembert* it will, it is believed, be found but a poor production, below the author as well as the age.

Prudential considerations suggested to the French Philosopher the precaution of seeking shelter under the mantle of the foreign sage. But of this perhaps in another place.

Ingenious as, in several parts, and in several respects, it would, upon a particular examination, be found,—smoke, rather than light, will, upon the whole, be seen to be the result of it. At the very first step, the whole field, it will be seen, is involved in an all-obscuring cloud: a cloud too thick for any ulterior operation to be capable of dissipating.

Its principal merit and use will, it is believed, be seen to consist in the having formed, and presented to view, a general conception of a work of this sort,—and the having placed together, under one view, the whole stock of the materials, at that time known, to belong to it and to require to be employed in the composition of it.

Taking the work in the form in which it is exhibited by D'Alembert, the following are among the imperfections, which have presented themselves as chargeable upon it,—

1. The very *subject* of the work, inadequately designated.
2. The *primary source* of *division*, unhappily chosen.
3. The *scheme of division*, loose and irregular.
4. The *appellations*, in several leading instances, *inapposite*.
5. The *distinctions*, in several instances, *groundless*; distinctions, without any determinate and assignable difference.
6. *Repetitions abundant*:—under different names, the same object repeated a multitude of times.
7. The *texture* of the discourse *incomplete*: no *verbs*; consequently no *propositions*; nothing but *substantives*, with here and there an *article* or an *adjective*.

I. *Subject of the work, inadequately designated.*

Of the relation between *Art and Science*,—as well as of the relation between Art and Science *taken together* on the one part, and the *remainder* of the whole field of *thought* and *action* on the other part,—the idea above given† will (it is hoped) be found a tolerably clear one. Of this relation, no attempt to give any idea is made in *D'Alembert's Map*, or in the *Explanation* given of it.

"*Systême figuré*"—figured system: des *Connoissances* Humaines—of Human *Knowledge*, is the *title* under which the whole contents of the Table are arranged. At the conclusion, even *Poetry*, presented to view in the character of the principal product of the *imagination*, is, at the same time, exhibited in the character of a subject, or a branch, of the all-comprehending aggregate—human *knowledge*.‡ In the same paragraph, and but four lines after, he speaks of this Table, by the description of "*a Genealogical Distribution or Map of the Sciences and the Arts*;" and, in this loose shape, and no other, is introduced the only mention made of *the Arts*, or the word *Art*. And, though

* The denomination *Encyclopedia* had established usage, and perhaps even necessity, to warrant it.

Considered, however, in its original import, viz. *instruction in a circle*, it is not in every respect a very happy one. Moving continually in a circle is not the way to get on. By labour, speed may indeed be increased; but by no degree of either can any advance be made. Thus, at the very outset, and by the very name, an irrelevant idea is obtruded, and in lieu of that encouragement which is so much needed, discouragement is presented.

The image of a *field* presented itself as being in every respect much better adapted to the purpose. By the image of a circle, is presented the idea of a limited extent, determined by the circumference. By the image of a field no limitation whatsoever is presented.

This image of a *field* will moreover be, with equal convenience, applicable to two expanses—two perfectly distinguishable, though intimately connected expanses, one within the other—the one of them boundless, and so therefore the other, viz. the field of *action* and *thought*, and the field of *art* and *science*.

In the pursuance of this *necessary* fiction (for all language which has *mind* for its subject, is unavoidably fictitious, speaking of *mind* as if it were *matter*,) on the occasion of the use made of this necessarily fictitious image, there will be found a convenience in speaking, sometimes of the ideal *receptacle*, the *field*, as if it were a real one, sometimes of the *objects* in question, viz. the several branches of art and science, in the character of its *contents*. By the word *field* this convenience will always be afforded.

† Table I. note (9.)

‡ Voilà toute la *Partie Poetique* de la Connoissance Humaine; ce qu'on en peut rapporter à l'imagination, et la fin de notre distribution généalogique (ou si l'on veut Mappemonde) des Sciences et des Arts.—*D'Alembert Melanges*, i. 239. *Amsterdam*. 1767. *Explication du Systême figuré*.—N. B. The above, as far as it goes, is an exact copy of the original; but, as in the grammatical structure of the passage some deficiency in the articles of clearness and correctness presents itself, some slip of the press is suspected.

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fiction is mentioned as an essential ingredient in the composition of the idea meant by him to be attached to the word, yet neither on this occasion, nor on any other, is it brought to view in the character of the name of an *Art*, nor in any other character than that of the name of a branch of *Science*.

From the difficulty here in question, the mind of D'Alembert, it therefore appears, withdrew its force. His precursor, *Chambers*, in the Preface to his Dictionary had, before him, grappled with it; but (as any one, who, in this view, may be disposed to turn to that elaborate work, will, it is believed, find reason to acknowledge) altogether without success.

Instead of *Knowledge*, in which (see Chrestomathia, Table I.) *Science* is included,—instead of knowledge alone, the subject of the work in question should then have been *Art and Science*: art and science all along *in conjunction*: for, in conjunction they must all along be taken and considered, or no tolerably adequate conception of either will be formed.

But the *subject* of *art and science together*, what is it?—Answer—*Being* in general: *being*, in all the *modifications*, of which, to our view, it is susceptible. *Being*, in some shape or shapes, the *subject*,—*well-being*, in some shape or shapes, the *object*,—of everything that, by man, is or can be *done* or *thought of*. Of these fundamental and eminently simple truths, the bare mention may suffice for the present. In the section, in which some of the *first lines*, of the sort of *map* in question, are attempted to be given, the consideration of them will come to be resumed. As the process of division and distribution, drawn as the principle of division is from different *sources*,—as this sort of anatomical process proceeds, the several modifications of *being* which are the result of it, display themselves to view.

II. *Primary Source of Division, ill chosen.*

The primary *source* of his divisions is,—what? Not the nature of the *subject*, and of its respective parts, but, as already noticed, the nature of the several human *faculties*, which, by a strange misconception, are respectively considered as applying themselves exclusively to different parts of it.

Strange indeed may this misconception be pronounced: at any rate, if it be true, that, when these faculties come to be mentioned, so it is that, of all the branches into which the body of the arts and sciences has ever been or ever can be divided, not a single one can be mentioned, upon which the whole list of the human faculties can not be shown to be, in some way or other, applied.

Memory, Reason, Imagination.—Of these, and these alone, is his list of the human faculties, as brought forward on this occasion, composed. If, for any other purpose, if, on any other occasion, asked for a list of those faculties, would D'Alembert have given this for a complete one? *Perception*, for example, not to look any further, would not *this* have been added? would it not have been placed before *Memory*? But the truth is, that in the subsequent ramifications, though not in this primary one, not only *perception*, but other faculties besides, are by D'Alembert himself brought to view.

But, for this purpose, what list of these faculties, other than a complete one, could, with propriety, have been proposed to serve? In addition to these three, each of which, according to this division, applies itself exclusively to a certain parcel of the branches of *art and science*, or at any rate of *science*, is it that there are any, of which no application is made to *any* branch of *art* or *science*? Of the faculty of *perception*, for example, is it that no application is made, in the study of *Natural History* for example? If, either in this or in any other instance, any such faculty be to be found, if this be indeed a truth, it surely is not of the number of those truths, which are so completely obvious, that no proof of them can, either for conviction or satisfaction, be justly regarded as necessary.

Quere: unless it be through the *perceptive faculty*, through what medium does the *retentive* receive any of the original, and exteriorly derived, part of its contents?

Of a set of fictitious entities to give in a list, neither the correctness nor the completeness of which shall be exempt from dispute or doubt, cannot be a very easy task. Of the articles inserted in the Note, neither the *perceptibility*, (meaning that sort of perceptibility of which these sorts of fictitious entities are susceptible) —neither the perceptibility, nor the mutual *distinctness*,—say rather *distinguibility*,—will, it is hoped, be found much exposed to dispute.*

The *inventor*, the *learner*, the *teacher*: the *inventor*, or in the place of, or in company with the *inventor*, the *discoverer*, and their assistant,

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*** Of those which are here distinguished by an * mention is made in D'Alembert's Table: those and no others.

*1. *Perception*, or say *perceptive faculty*, *alias simple apprehension*.

*2. *Judgment*, or say *judicial faculty*.

*3. *Memory*, or say *retentive faculty*.

*4. *Deduction*, or say *ratiocination* or *deductive faculty*—that by which a number of judgments, i. e. acts of the *judicial faculty* are deduced one from another.

5. *Abstraction* or say *abstractive faculty*.

6. *Synthesis*, i. e. *combination*.

*7. *Imagination*, or say *imaginative faculty*, whereby a number of *abstracted ideas*—*results*, or *products* of the exercise of the *abstractive faculty*—are combined, compounded, put together as it were, into one *image*. It is combination, preceded by, and operating upon, the products of abstraction.

8. *Invention*, or say *inventive faculty*, whereby, out of a number of the products of the *abstractive* faculty, such compounds are formed as are *new*: i. e. were never produced before. *Invention* is *imagi-*

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the *observer*, in regard to every branch of science, be it what it may,—by these different sets of persons, different faculties, or sets of faculties, are put into exercise.

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nation, directed in its exercise to the attainment of some particular *end*.

9. *Attention*, or the *attentive faculty*. The exercise of *this* faculty seems to be the result of an exercise of the *will*: of a special application made, of the power of *that* faculty to the purpose of attaching to their work, with different *degrees of force*, and for different *lengths of time*, any one or more of the several distinguishable faculties above-mentioned.

10. *Observation*.—In this are included, *perception*, *memory*, *judgment*, and commonly *ratiocination*, set and kept to work by *attention*, and directed commonly in their exercise to the accomplishment of some particular *end*.

11. *Comparison*. This is an application made of the faculties of attention and judgment. In this case the attention applies itself alternately to the objects which are the subjects of it—viz., for the purpose of descrying their mutual relations to each other.

12. *Generalization*. This is a mode of *imagination*: i. e. from the observation of one or more individuals, perceived or supposed to be endued with a certain property, *imagination* of an indefinite number of individuals, regarded as being possessed, each of them, of a property of that same sort. It is *combination*, performed by the *imagination*, and guided by *observation* of analogy, i. e. similitude.

13. *Induction*: i. e. *deduction*, or say *ratiocination*, applied as a result of the process of *generalization* as above, followed by a *judgment* accordingly passed, pronouncing that the sort of conformity so *imagined* has, in the instances in question, been *realized*.

14. *Analysis*—i. e. *division* (literally *resolution*)—viz. *logical*, or say *noological* analysis. This is the converse of *generalization*; and supposes that operation antecedently performed. By the combination made of the ideas of a multitude of individuals, or sorts of individuals, in virtue of some property, which is supposed to belong to them in common, and which is thus made to serve as a bond of ideal union, by which they are bound together into one *aggregate*, and that aggregate recorded and fixed by one common name,—*generalization* is performed. By the *division* and *sub-division* of an aggregate thus found, correspondent names, whether single-worded or many-worded, being either formed or made for the several parts, which are the results of the several acts of division and sub-division,—*analysis*, i. e. the *resolutive* division and decomposition of the antecedently formed artificial aggregate, is performed.

Thus, on the *Porphyrian tree*, as in the annexed Table, working in the direction of *generalization*, and setting out either from *Homo* or *Brutum*, or from a sub-species, or an individual of either species, you may arrive, immediately, or through *sensitivum*, *vivens* and *corpus*, all or any of them, at least at *substantia*. Working in the direction of *synthesis*, the course you take is exactly the reverse.

By *imagination*, the idea and practice of *logical*, *noological*, *metaphysical* analysis, was deduced from that of *physical*. Physical is either *mechanical* or *chemical*. *Physical* analysis is an instance of a *real* and *material* operation; *logical*, of an *immaterial*, and thus, in some sort, a fictitious one, of the same name.

A term, which will be apt to be considered as not only the opposite, but exactly co-extensive, correlative of *analysis*, is the above-mentioned term *synthesis*:—*synthesis*, literally, *putting together*; *analysis*, literally, *resolution*, i. e. *putting asunder*. If the coincidence were thus complete, *synthesis* and *generalization* would be exactly synonymous, and ought to be interconvertibly employed. This, however, is not the case. Of any number of ideas, how heterogeneous soever, the putting together may be termed *synthesis*. But, in so far as the term *analysis* is applied, the ideas, comprehended in the subject in which the operation is to be performed, are by the supposition *homogeneous*. The subject analysed is an aggregate or *genus*, which is divided into *species*, those into *sub-species*, and so on. The only case in which *synthesis* is exactly opposite and correspondent to, and no more than co-extensive with analysis, is when between the ideas put together there is that sort of conformity from which the act of putting them together receives the name of *generalization*.

Analysis and *synthesis*—*analytic method* and *synthetic method*—are locutions which are but too frequently to be found employed, on occasions in which the import meant to be attached to them is far from being clear and determinate. The same operation which by one person is called by one of these names, shall by another person be called by the other. By giving to every supposed explanation the name of *an analysis*, *Condillac*, in his Logic, thinks he has explained everything: and thus it is that he explains nothing. *Analysis* (he says) *is nothing but a language well-made*. He sees not, that it is of an act of *synthesis* (the declared object of his antipathy) that every name, which is not, in the grammatical sense, a *proper* name, is the sign and the result: and that, were it not for that despised and much vituperated agent, his favourite and exclusively lauded instrument would not have a subject on which to operate.

15. *Methodization*, or say *arrangement*, or the exercise of what (if a *faculty* is to be imagined for the purpose) may be called the *tactic* faculty. It may be employed, with little or no exception, in the service of every one of the above-named faculties, in the exercise of which the *attention* is employed. By it, for giving facility to *comparison*, objects are *imagined* to lie in a certain order; for example, *above*, *below*, or *by the side of* one another.

16. *Distribution*. In effect this is, generally speaking, much the same sort of operation as *Division*: but, for presenting that effect to view, a somewhat different image is employed. In the case where the word employed is *division*, whatsoever may be the parts, or elementary articles contained in the subject, they are considered as antecedently aggregated into one *whole*: whereupon, in proportion as the operation proceeds, that whole is divided into *parts*. In the case where the word employed is *distribution*, whatsoever may be the subject on which the operation is to be performed, the parts or component articles, whatsoever they may be, which are considered as belonging to it, are considered as lying in a state of separation from each other.

When a multitude of articles being considered as co-existing, no *aggregation* of them is considered as having been made, no *division* can be considered as being capable of being made: consequently, in

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What the *inventor* is in relation to *art*, the *discoverer is*, in relation to *science*. In art and science, not merely every existing branch, but every the minutest twig, must have given exercise to the *inventive* faculty, ere it could have come into existence. *Invention*, as above, is *imagination*, taken under command by *attention*, and directed to the accomplishment of some particular *object* or ~~end in view~~. The products of the exercise of the *abstractive faculty* are the materials of which the work of the imagination is composed. Among the objects of invention or discovery, is *method*: and, when once invented or discovered, it becomes an instrument in the hands of *Invention*, of *Discovery*, and of *Observation*. It is by Natural History, in greater proportion, than by any other branch of art and science, that exercise is afforded for *observation* and for *method*: next to that by those branches which have *mind* for their subject.

Abstraction, *Imagination*, *Invention*, *Discovery*, *Methodization*, *Communication*, of none of these faculties does the *learner*, as such, find in himself any demand for the exercise: *attention* and *observation*, applied to the impressions and ideas, which are respectively the products of the exercise of the several faculties of *perception*, *judgment*, *memory*, and *ratiocination*,—for the exercise of all *these* faculties, but for that of no *others* than these, does the situation, occupied by the *learner*, as such, afford a demand.

To the faculties, for the exercise of which the situation of the *learner* affords a demand, that of *teacher* adds that of *communication*; of communication, and in so far as, in the *method* which he employs, there happens to be anything which was thought of by him, without its having, to his knowledge, been thought of by any other person, *invention*.

Without any the slightest notice taken of any of these distinctions—*Poetry*, with its nearest branches, in vast capitals, and those next to them still in great and upright ones; after Poetry, *Music*, *Painting*, *Sculpture*, *Civil Architecture*, and Engraving, these, and no others, are, by D'Alembert, huddled together in a corner, and—as if standing in awe of *Poetry*, and should they presume to place themselves on a line with her, fearing the lash of one of her daughters, viz., *Satire*—are dressed, in capitals, indeed, but those *leaning* ones, and, in comparison with those which are not refused to *Madrigal*, *Epigram*, or *Romance*, scarcely visible. These, too, are all together placed under the head of *imagination*; as if, in the first place, to the exercise of all *these* branches of art, the exercise of the imaginative faculty were necessary; and as if, in the next place, it were not so to any of the *others*.

Yet, when once pointed out, who is there that does not recognise, that neither to the *Musical* performer, nor to the *Painter* as such, nor to the *Sculptor* as such, nor to the *Architect*, or, in plain English, the *Builder*, as such, nor to the *Engraver* as such, is any exercise of the *imaginative* faculty necessary? Yes; in so far as, by any of them, anything *new* is to be hit upon; but in this there is nothing which they do not possess in common with the artist in every other line whatsoever.

Aristotle was an *observer* and *inventor*: for by him was invented, how far soever from perfected, the art and science of *Logic*, schoolmistress of all the *other* arts and sciences. *Bacon* was an *observer* and *inventor*: for by him was invented the art of *learning Natural History* and *Natural Philosophy*, more particularly the latter. *Newton* was an *observer*, a *discoverer*, and an *inventor*. *Locke* was an *observer* and a *discoverer*: his *field* of discovery the region of mind. *Linnæus* was, *Werner* is, an *observer* and *inventive*, and thereby *imaginative*, *methodizer*:—which of these men was ever a *Musician*, a *Painter*, a *Sculptor*, a *Builder*, or an *Engraver*?

Placed where it is, the word *Reason* is, of itself, sufficient to involve the whole subject in a cloud. To the production of confusion and dismay, had that been the purpose, it would have been but too effectually adapted; clear conceptions, placed where it is, it is not in the nature of it to bring to view. What is the object meant to be presented by it?—*Answer*. One of the faculties of the human mind. What,

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this case, *distribution* is the only one of the two instruments of method that the nature of the case can be considered as admitting of.

17. *Communication*, or the *communicative faculty*: a faculty which may have for its *subject*, the results or products of the exercise of any one or more of the several faculties above-mentioned.—*Speaking*, *writing*,—and *pantomime*, i. e. discourse by *gestures*, or otherwise by *deportment*—are so many modes, in and by which it is exercised.

Communication, on the one part, supposes *receipt*; or say *reception*, on the other. In so far as, to the exercise of the act of *reception*, *attention*, on the part of the *receiver*, is considered as necessary—the *receiver* is styled a *learner*.

For *correctness*—viz. as a *test* of, and *security* for that quality—for correctness, as well as clearness, this test would require a correspondent list of examples. But, for any such additional quantity of matter, neither time nor place can here be afforded. In its present form it must, therefore, be left to stand: in its present form, and with all its imperfections.

An intricate subject of discussion would be—the order in which the several articles might be most advantageously disposed, and made to follow one another. What shall be the principle of arrangement? Shall it be priority? But from this source no decision can be deduced, as between a number of operations which are performed at the same time.—Shall it be *degree* of *simplicity*?—From this source some light seems to be reflected on the first steps: but, when multitudes flock together, with equal forwardness, this light is extinguished.

[The author's opinions on these subjects will be found more at length in the works on logic and its cognate branches of knowledge immediately following the Chrestomathia.—*Ed.*]

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then, is this faculty?—*Answer*. The faculty called the *ratiocinative* or *inductive* faculty, including, of course, the *judgment* or *judicial faculty*. What, then, is *Reason*?—*Answer*. It is a name which, on *some* occasions, and *only* on some occasions, a man is wont to give to the ratiocinative faculty, or the exercise of it. What then are these occasions?—*Answer*. Those, and those alone, on which the exercise, which he considers as given to it, is such as he approves of. Here, then, instead of that *neutral* sort of appellation, which alone is suitable to the purpose, viz. that sort of appellation, of which the words *induction* and *inductive faculty*, *judgment* and *judicial* faculty, as well as the words *memory* and *imagination*, are exemplifications, the appellative, employed for the designation of the *ratiocinative*, including the *judicial* faculty, is an *eulogistic* one.

Of the act of misappellation thus committed, now then observe the consequence. Of every application made of this word, in the designation of the faculty in question, the effect being to attach to it a latent proposition, expressive of the *approbation* of the speaker, as annexed to the exercise given to the faculty, one consequence is, that, without a contradiction in terms, it cannot be employed, on any occasion, in which it is the intention to bring that exercise to view, in the character of an object of disapprobation; or even to avoid bringing it to view in the opposite character.

Thus it is, that of the *three* leading terms in question, while *two* are, as far as they go, proper and suitable to the purpose, between them is thrust in another, which mismatches them—and communicates to the whole group its own delusive colour.

Memory and *Imagination*—it is by the *Logicians*, that *these* two appellations, simple and suitable as they are, were taken in hand. *Reason*—it is of the *Rhetorician* that this appellative was the choice. In the word *Reason* may be seen one of that numerous set of names of *fictitious entities*, in the fabrication of which the labours of the *Rhetorician* and the *Poet* have been conjoined. In *Reason* they have joined in giving us a sort of *goddess*: a goddess, in whom another goddess, *Passion*, finds a constant antagonist—and a third goddess, *Religion*, *Reason's* elder sister—sometimes a troublesome rival, sometimes a useful subordinate. It is not by any such mythology, that any clear and correct instruction can be conveyed.

Under the head of *Memory*—under that one head—are arranged the contents of the whole field of *Natural History*, together with those of the field of *History*, simply and properly so called:—under the head of *Reason*, the contents of the field of *Natural Philosophy*.

In regard to the distribution thus made, thus much is indeed true, viz. that in the formation and retention, of ideas relative to the subject of *Natural Philosophy*, the quantity of exercise given to the ratiocinative faculty,—more particularly in so far as the art and *science* takes for its subject the relation between *cause* and *effect*,—is commonly greater than the quantity of exercise given to *another* faculty? But, this *other* faculty, what is it? Not the *Memory*, to which the two philosophers refer so much; but the *Perception* or *Apprehension*, to which they refer nothing.

Scarcely has even *History*—*History*, in its narrowed and most usual sense, viz. an account of *states* of *things* and *events*, as they are supposed to have had existence in times past—scarcely in this limited sense can *History*, with more propriety than *Natural History* or *Natural Philosophy*, be said to belong to the province of *the Memory*. To the *Memory*, it is true, almost exclusively, before the invention of the art of *writing*, must all successive generations have been indebted for whatsoever notions they could have obtained and retained, concerning the states of things and events, that had had place in the respectively preceding generations. But,—of a state of things, or an event, that had had place at an antecedent point of time, when the description had once been expressed and fixed, in and by the permanent sort of signs, which are the product of that mind-exalting art,—a man's faculty of bearing it in mind was no more dependent upon *memory*, than his faculty of bearing in mind the matter of any other branch of art and science:—the correspondency, for example, between the acquisition of mechanical *power* and the sacrifice of *despatch*; the composition of *water* and respirable *air*; or the equivalency of the sum of *all the angles* that can be constructed round any given point, to that of *four right ones*.

A circumstance which, at the times respectively in question, these philosophers seem not, either of them, to have been aware of, but which, when once brought to view, will not be found the less undeniable, is, that not only the practice and knowledge that has had place, in relation to *international intercourse* and *internal government*, but every other branch of Art and Science—every one as well as every other—has its *History*. *Natural History*, *Natural Philosophy*, *Poetry*, *Music*, *Logic*, everything. In relation to *War* and *Government*, has the state of this part of the universe, presented itself at different times, in different shapes? so has it in relation to *Mechanics*, to *Chemistry*, to *Poetry*, to *Music*, and so on. Not to speak of the *future*, which, to our limited view, is, all of it, in a state of *contingency*, the distinction between the *past* and the *present*, to what portion of the whole field of thought and action, to what portion of the known field of existence, does it not apply itself.

Placed under the head of *Memory*, the title *Irregularities of Nature (Ecarts de la Nature)* presents itself in the character of a blotch, to which a sponge might apply a not incongruous cure. Natural, and but too excusable, in *Bacon's* time, it was not equally so in *D'Alem-*

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bert's. In the time of the English Philosopher, the mind was annoyed and oppressed by terrors, which, in the time of his French disciple, had lost, though not the whole, the greater part of their force. In *Bacon's* time—in the early part of the 17th century—everything in nature that was, or was supposed to be, *extraordinary*, was *alarming*; alarming, and in some shape or other, if not *productive*, *predictive* at least of human misery. In this place, as in other places—at this time, as at other times—*Ghosts* and *Witches* composed a constant part of the population, *Devils* an occasional one. Patronised by *Queen Elizabeth*, Dee had not long ceased to hold converse with his disembodied intimates: *Lilly* was preparing for the connexion he succeeded in forming with *his*. To burn heretics, to hang witches, and to combat devils, were operations, for all which Bacon's Royal Patron held himself in equal and constant readiness.

Celestial Prodigies, Prodigious Meteors, Prodigies on *Land* and *Sea, Monstrous Minerals, Monstrous Vegetables, Monstrous Animals, Prodigies* of *the Elements*, by D'Alembert, all these (alas!) are exhibited in the character of so many distinct classes of the subjects of human knowledge, distinct classes of things, subordinate, and standing next in subordination, to the including class denominated as above, *Irregularities of Nature*. This too under title *Memory*: for most of them at least, the *Imagination* might have been a more apposite one.

In the days of *Bacon* battles on dry ground were scarcely more common than *battles in the air*; in the thin element, peace had assuredly been already pretty well established in D'Alembert's time.

Placed under the head of *Reason, Divination* and *Black Magic* were perhaps two whiffs of necessary incense offered up to the *Archbishop of Paris*: subjects, if not branches, of that science which had for its already declared subjects "*spirits beneficent* and *malificent*," for the expulsion of the latter of whom the Ritual of that Most Reverend person furnished him with weapons, to which they had never been known to oppose any effectual resistance—those gems in the panoply of theological warfare could not then be spared;—but, by that oblation his appetite for the supernatural might, one should have thought, have been satisfied, without the addition of so many swarms of monsters.

At present, at any rate, much, it is believed, will hardly be found to be said, in favour of a principle of Classification, by which a *middle-sized* man is placed in one niche, a *tall* man and a *short* man *together* in another.

In the ancient order of things, commencement precedes accomplishment, trial precedes success; *experiment* upon a *small* scale precedes *establishment* upon a *large* scale. In each and every part of the field, *experimental researches* must necessarily have preceded those *established practices*, of which the products of *handicraft arts, manufactures*, and the arts called *fine arts*, are the results. Accordingly, in the sketch attempted in the next section, exhibited under the new name, proposed as a substitute to this its present trivial one, *Experimental Philosophy* precedes *Technology*, the branch of *science* which belongs to the necessary and more useful part of the *arts*.

Not so in D'Alembert's. In *that*, it is under the general head of *Natural History*, that we see ranked what concerns all *finished* products of the *Arts*, with their *et ceteras*, as above; while, by the still more general head *Memory*, intimation is given, if not that it is by the exertion of that single faculty that they are *produced*, at any rate, that it is by that one alone of all the human faculties, that anything *else*, in relation to them, is either *known* or *done*.

A dislocation so strange, by what train of thought can it have been produced? From the terms of the Table, a sort of conjectural answer may be collected. By every exercise given to *Art*, some production of *Nature* is put to *use*. Accordingly, *Arts*, (handicraft) *Trades* and *Manufactures*, are there exhibited, in the character of exemplifications, of the "*Uses* made of *Nature*." But, by the same title, might not *Poetry* be ranked under the head of *Natural History*? and its fruits—an *Epic* or *Dramatic* poem, for example—represented as being the work of *Memory*, or, at any rate, as belonging, in some way or other, to the *province* or *faculty* of *Memory*? For, the *brain*, by which it was dictated, as well as the *pen* by which it was written, not to speak of the *gall nuts*, the *sulphate* of *iron*, and the *water*, by which the pen was enabled to give permanence to the marks traced by it, what are they, any of them, but so many works of *Nature*?

III. *Scheme of Division, loose and irregular.*

In a former section (VI.) the *dichotomous* or *bifurcate* mode of division, performed upon the *exhaustive* principle, has been already brought to view, in the character of the only one perfectly suited to what ought to be the design of the *first lines* of an *Encyclopedical Map or Table*. Of the *considerations* or *reasons*, by which its claim to that character was suggested, a view will be given in an ensuing section.

At the same time the observation was made, that, with the regularity and comprehensiveness which characterize that mode, the mode pursued in this Map of *D'Alembert's* forms a striking contrast.

Of the existence of this character in it—of this *imperfection*, if such it should be deemed—it would be useless to present to view, in this place, and in this manner, any protracted chain of proofs. By a single glance at the Table, they will be seen all together:—for the assistance of the first steps of such a survey, a few words will be sufficient at least, if not superfluous.

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Common Trunk, the *understanding*. Ramification of this trunk into *three* branches: viz. *Memory*, *Reason*, and *Imagination*:—division, trifurcate. Under *Memory* placed *History*: no division. Under History, *Sacred*, *Ecclesiastical*, *Civil*, *Ancient* and *Modern*, and *Natural History*:—division, *quadrifurcate* or *quinquefurcate*. Under Natural History, *Uniformity of Nature*, *Irregularities of Nature*, and *uses* made of Nature:—division, *trifurcate*.—Of title *Uniformity*, seven *branches*: of title *Irregularities*, seven. By the side of title *Uses made of Nature*—terms put in apposition, *Arts*, (handicraft) *Trades*, and *Manufactures*:—division, *novemfurcate*—the list of *nine* branches, concluding with an *&c.*; each of them having its own branches, each concluding in like manner with an *&c.*

Thus much under *Memory*: and, without proceeding onwards either with *Reason* or with *Imagination*, this sample will assuredly be found sufficient.

IV. *Appellations inapposite.*

Of this species of imperfection no exemplifications worth noticing have been observed, other than those, with which the language he found in general use, stood chargeable,—and of which the principal samples have, in this Essay, been already brought to view. (§ 4.)—These are, 1. *Natural History*—2. *Philosophy*:—(not, as with us, *Natural Philosophy*, but simply *Philosophy*:) *under* which comes *Physics*. *Physics* is divided into *general* and *particular*: but under neither of them is *Natural History* (that being ranked under *History*) included.—3. *Mathematics*.

The promise, which it fell to his lot to give, being the promise of a body of information, relative to all the branches of *art* and *science*, which were, or were at that time considered as being, in existence,—that which it was necessary his Map should contain, was a collection of those *names* by which they were respectively in use to be designated, and by which and which alone they were generally known. Under these circumstances, whatsoever might be the imperfections which any of these denominations might be found labouring under, with none of them could this intelligent philosopher be justly chargeable: and it appears not that to this established stock of imperfections any of his own making have been added.

V. *Distinctions groundless*:—unwarranted by any determinate, and assignable, correspondent differences.

Of this species of imperfection several exemplifications may be seen under the ensuing head of *Repetitions*.

VI. *Repetitions abundant*:—under different names, the same objects presented to view a number of different times.

Four times over, in the character of subjects of *Memory*, are the several classes of known bodies, of which the earth's surface is composed, brought to view in this Table: viz. 1st, under the name of *Meteors*; 2dly, under the name of *Earth* and *Sea*; 3dly, under their own distinctive names; viz. *Minerals*, *Vegetables*, and *Animals*; 4thly, under the name of *Elements*.

Four times? Yes: and also *four* times *more*: viz. all such of them to which it should at any time happen to present to the eye of the reader, whoever he may be, anything, which, to that same eye, shall appear to have in it anything that is *extraordinary*; as if *ordinary* and *extraordinary* were anything more than *relative* terms: relative, not to the nature of the objects themselves, but to the position, occupied at the moment, by the mind, by which they are respectively viewed: as if the same object, which to a preceding generation had been *extraordinary*, had not become *ordinary* to a succeeding one. Such as they are, here they follow.—1. *Prodigious Meteors*, or Meteoric Prodigies. 2. *Prodigies* on *Earth* and *Sea*. 3. *Monstrous Minerals*. 4. *Monstrous Vegetables*. 5. *Monstrous Animals*. 6. *Prodigies of the Elements*.

Not content with thus presenting them, *eight* times over, in the character of *objects* or *subjects* of *memory*, once more are we made to see these same beings, and *now* in the character of *objects* or *subjects* of *Reason*: for, still they are the same existences, and even viewed under the same aspects, notwithstanding the termination *logy* (in the French, *logie*,) which now forms a termination to the Greek word, by which they are respectively brought to view. Meteors are now represented, in the first place by *Meteorology*, then presently once more by *Aerology*: *Minerals*, first by *Geology*, then presently once more by *Mineralogy*: *Water*, by *Hydrology*: *Vegetables*, by *Botany*—divided, and not improperly, into *Agriculture* and *Gardening*.

Metsors (as already observed) *Meteors*—i. e. *metsoric* (meaning neither more nor less than *elevated*) bodies or particles, are,—what are they, what can they be but, bodies or particles, of the number of those of which the earth's surface is composed?—only mixed up with that part of it, which is mostly in a *gaseous* state, and then detached, to a distance more or less considerable, *above*, i. e. *beyond* that principal mass, which is partly in a *solid*, partly in a *liquid* state?—masses, consequently composed, in different and ever-varying proportions, of matters belonging respectively to the three great *kingdoms*, as they are called—the *mineral*, the *vegetable*, and the *animal*.

Yet, in the character of a sort of subject—and that a distinct one—of *Natural History*, *D'Alembert*, as we have seen already, places *Meteors*, and *that* in a situation anterior to the situations respectively allotted to *Minerals*, *Vegetables*, and *Animals*: and to them he *subjoins*, as if they were constitutive of a dis-

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tinct class of objects, *Elements*:—a word which in trivial language is indeed employed even now: but which had had its rise, in modes of thought and action, which, even in *D'Alembert's* time, were already antiquated and exploded. *Four* in number, as every body knows, used to be these elements: viz. Earth, Water, Air, and Fire. *Earth*, a term employed to designate any mass of matter whatsoever, in so far as it is considered as being in a *solid* state: *Water*, a term employed to designate a mass of the same matter, when in the liquid state; —a mass of matter, which is itself the same, though, by its being thus designated by a different appellative, represented and spoken of as if it were different. *Air*, a term by which the self-same mass is once more designated, when considered as being in the *gaseous* state. *Fire*, a word, to which no determinate idea was ever annexed, but which is wont to be employed, whenever, in conjunction with an extraordinary mass of *light*, an extraordinary mass of *caloric*, i. e. *heat*, is perceived to issue from the same spot.

In a manner not unsuitable to our situation, and thence to our mode of contemplating objects of all sorts, the world, i. e. all that part of it, in relation to which it has been within our power to obtain any the smallest and faintest spark of knowledge, has by some been divided into *Earth* and *Heaven*: *Earth*, the globe which we inhabit: *Heaven*, comprehending all other globes, all other bodies, whatsoever. Accordingly, such is the conception, by which the Philosopher seems to have been guided, while *Memory* was the presiding deity. First comes *Celestial* History, and without any division: then comes *History by itself*, followed by its several adjuncts: viz. *Meteors*, *Earth*, and *Sea*, and so forth, as above.

In conformity to this part of the plan, when, furnished with Greek-sprung names, with the termination *logy* tacked to each name, the same objects or subjects came to be put under the presidence of *Reason*, *Science de la Nature* —(*Natural History* not having, it should seem, been recognised in the character of a *science*, but only as a sort of *knowledge*, different from, and employed to prepare the way for, *science*)—*Science de la Nature*, followed by its synonym *Physique particulière*, should have been branched out, in the first place into *Cosmologie* and *Géologie*, and after that *Géologie* into *Météorologie*, *Mineralogie*, and the other *logies*, according to the method which, as above, had already been observed. Instead of *that*, follow the particulars, in an order which, besides being, with relation to that in which the same objects had already been arranged, so completely incongruous, is, in itself, so completely perturbate, that to delineate, in the form of a continuous discourse, those intrinsic incongruities, which, after *this* intimation,—at any rate, with the help of the ensuing sketch—may be discovered by the examination of about forty words, (such being the number contained in this part of D'Alembert's sketch) might afford full work for as many pages.

Branches of the *Science of Nature*, alias *Particular Physics*, seven; viz. 1. Zoology. 2. *Physical Astronomy* (as if there were an *Astronomy* that was not *Physical*.) 3. *Meteorology*. 4. *Cosmology*. 5. *Botany*, 6. *Mineralogy*. 7. *Chemistry*. Thus, in the first place, *Animals* of all sorts, then the *Stars*, and then (whatever they are) the *Meteors*, are brought to view, and that by *Reason*, before any such receptacle as *a world* has been found for them to exist in; and, between *animals* and the *plants* on which they have to depend for their existence, this same whole *world*, as soon as it is found, is placed, besides all the *stars* and all the *meteors*.

In company with this *Figured System* (*Système Figuré*,) and antecedently to it, is presented by the Author, as above noticed, an "*Explanation*" of it. For an explanation, and therein for a justification, of the sort of order, a sample of which has just been exhibited, reference to the above *Explanation* was, of course, made. Of this reference, what was the result?—that the order pursued in the Explanation was, on this part of the ground, altogether different from the order, given to the articles which it professed to explain. This too after his having observed, in so many words, that, (p. 233,) "*Particular Physics ought to follow the* SAME *distribution as Natural History*."*

In this same *Explanation* another strange intimation is given; and such is the store set upon it, it is repeated through the whole course of several pages. This is, that so long as under the presidence of *Memory* you are studying *Natural History*, (in which he includes the history of all the *arts* except the *fine* ones,) you are to make use of your *senses* and nothing more; on the other hand, when you come to the study of the same objects under the presidence of *Reason*, then it is, that for the first time you are to apply to them the faculty of *reflection*, and so long as *that* is at work, you have no occasion for your *senses*.† What perhaps might be found to be true is, that in the study of *Natural History*, rather more use is made of the senses than in that of *Natural Philosophy*; in the study of Natural Philosophy, rather more use made of the faculty of *reflection* than in the study of Natural History. But he who should attempt to do anything in *Natural History*, without being at any expense

* La physique particulière doit suivre la meme distribution que l'histoire naturelle, p. 233.

† De l'histoire, prise par les sens, des *Astres*, de *leurs mouvemens*, *apparences sensibles*, &c., la réflexion a passé à la recherche de leur origine, des causes de leurs phénomènes, &c., et a produit la science qu'on appelle *Astronomie physique* . . . . . De l'historie, prise par les sens, des *vents*, des *plaies*, &c., ... la réflexion a passé à la recherche de leurs origines, ... &c.—*Ib.*

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in the article of *reflection*, or in *Natural Philosophy*, without making any use of his *senses*, would assuredly find it very up-hill work.

VII. The nature of the discourse *incomplete*; no *verbs* in it; consequently no *propositions*; nothing but *substantives*, with here and there an *adjective*.

By this sort of discourse, if discourse it can be called, for want of the necessary and indispensable tie, or *copula*, as the logicians and grammarians call it, which is afforded by the part of speech called a *verb*, no complete assertion being contained in it, no determinate information is conveyed.

By nothing short of an entire proposition can any such conveyance be made. True it is, that *nouns*, and in particular noun *substantives*, are the principal materials out of which the sign of an assertion is composed; but still, without the *copula* no determinate assertion is formed. Set down any two, or any greater number of substantives, out of these same materials, one man will make one sort of proposition, another man another, and a third man will not know what to make of them. Of the readers—that is, of the persons for whose instruction the work is intended—some, it is possible there may be, whose conception of the work, when executed, may be adequate to that which the workman, the instructor, had in his mind, at the time he executed it. But that such will be the case with the generality of readers,* is surely not the sort of supposition on which a work of this sort ought to be grounded. Destitute of this principle of fixation and bond of union, objects may, in innumerable multitude, and endless succession, be presented to the mind; and, after all, leave in it an impression, not more durable than that which is left in the waters by a vessel by which they have been traversed.

To the sort of sketch, a sample of which is attempted in the ensuing section, a Tabular Sketch, jotted down in this unconnected mode, will be found to bear much the same sort of relation, as a stock of bricks, mortar, and timber, deposited by the side of each other, bears to a house. Thus, instead of a structure ready put together for use, the reader, out of the materials thus shot down before him, is left to make one for himself as well as he is able. The learner is left, and called upon, to do for himself, what the teacher, perhaps because he knew not how to do it, has left undone.

Several causes concur, in recommending to the hand of the *workman* this mode of executing the work. In comparison of the opposite mode, the value given to the work in this mode is indeed small, and the interest of the *customer*, the *learner*, proportionably ill-served. Not so the interest of the workman, the *instructor*, over all errors and all ignorances a very convenient veil is everywhere spread by it. 1. No assertion at all being contained in it, no false assertion, no erroneous judgment, can be imputed to it. Scarcely in any way can a man thoroughly commit himself, by anything which he has inserted, still less by anything which he has omitted to insert, in it. 2. Yet, by a too natural misconception, the less the instructor has in this case done for his pupil, the more he is thought to have had it in his power to do, or even to have done. By this form of discourse, if discourse it can be called, an air of mysticism and oracularity is cast over it. This was among the characteristics of the *Egyptian hieroglyphics*. Ideas, such as they are, suggested in abundance; but, among them no such thing as an *assertion* to be found. Only in proportion as it is understood, is language of any use. Whatsoever is obscure is, in proportion to the obscurity, unintelligible. Speaking thus obscurely and unintelligibly, is it that you are *unable* to speak plain, or is it that you are *unwilling*? If unwilling, what but *deception* can be your object? Such are the questions to which every discourse stands exposed, in proportion as it is obscure.

Yet to those materials for thinking—loose as they were—profound, in former ages, was the depth of wisdom that was ascribed: to those loose materials for thinking, out of which the best thoughts that could have been made would, probably, have been, most, if not all of them, foolish ones. At the same time, while the understanding of the reader is thus left in this comparatively unsupplied state, his vanity is gratified: to do what the philosophers have left undone, affords to those who have a taste for it, a pastime; a pastime, in the course of which, as many little triumphs may be reaped, as there are propositions that can be put together out of such materials as it supplies.

Sketches of this sort, on a variety of subjects, are assuredly not wanting, in which D'Alembert may have found so many precedents, and thereby so many warrants, for this unconnected, and, to the reader, so little instructive,—but, at the same time, to the author, so much the most convenient,—mode. If, unconscious of any such warrant, he had regarded it as matter of obligation, to employ that mode which was best suited to the end in view, none but the *connected* mode would have presented itself to his view: the conception he would thus have been forced to frame to himself, would have been correspondently clear, and the work would have appeared, in a form very different from that in which it meets the eye at present.

All this while, to the French philosopher,

* By the writers on Rhetoric, a certain degree of unconnectedness being, in certain cases, capable of rendering the discourse more impressive, and, in its operation upon the passions, more efficient, is, under the name of *asyndeton*, i. e. that which is without *connectives*, brought to view in the character of a *rhetorical figure*. But the connectives, which on that occasion are in view, are—not *verbs*, but conjunctions—conjunctions *copulative*.

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circumstanced as he was, the choice of this inadequate form was matter, not so much of *policy* alone, as of *necessity*. But of this perhaps in another place.

Whether, *in any place*, it is in the nature of any such speculations, as the above, to be of any real use, to render to mankind any perceptible service,—whether for speculations of this sort, and to this effect, *the place* in which they are thus brought to view is a *fit* place,—these are, among the points in which, in his own way, every reader will pronounce his own judgment. By any one, whose patience may have carried him thus far, thus much at any rate will, it is believed, be admitted, viz. that if, at the time when that Table was made public, there existed, on the ground of utility, any real demand for a Table of that sort, that demand has not, by any of the information therein given, been superseded.

Section VIII.

*Specimen of a New Encyclopedical Sketch, with a correspondent Synoptic Table, or Diagram.**

Directly or indirectly, *well-being*, in some shape or other, or in several shapes, or all shapes taken together, is the subject of every thought, and object of every action, on the part of every known *Being*, who is, at the same time a sensitive and thinking Being. Constantly and unpreventably it actually is so; nor can any intelligible reason be given for desiring that it should be otherwise.

This being admitted, *Eudæmonics*, in some one or other of the divisions of which it is susceptible, or in all of them taken together, may be said to be the *object* of every branch of *art*, and the *subject* of every branch of *science*. *Eudæmonics*,† the *art*, which has for the object of its endeavours, to contribute in some way or other to the attainment of *well-being*, and the *science* in virtue of which, in so far as it is possessed by him, a man knows in what manner he is to conduct himself in order to exercise that art with effect.

Considered in the character of an *edifice* or *receptacle*, *Eudæmonics* may, therefore, be termed the *Common Hall* or *central place of meeting*, of all the *arts* and *sciences*: change the metaphor, every *art*, with its correspondent *science*, is a branch of *Eudæmonics*.

If the above observation be correct, it is only in one or other of two shapes or characters—viz. that of a *source of happiness*, or that of a security against *unhappiness* that *being* can in

* In the original edition of the Table there is the following note:—"The completion of this Table, as it now stands, having been posterior by about a twelvemonth to the printing of the letterpress of Chrestomathia, Appendix, (No. IV.,) to which it belongs, in the interval some few changes having presented themselves in the character of amendments, they are here inserted. But, of these alterations one consequence has of course been, a correspondent diversity, between the nomenclature employed in the body of the work and the nomenclature employed in this Table." In further explanation, it is said, "a convenience had, in the interval, been found in giving to the termination *scopic (regarding)* a more extensive application than in the first instance had been given to it." To have, in this edition, substituted the nomenclature of the Table for that which it supersedes, in the body of the Essay, would have occasioned the sacrifice of much valuable matter, attached in the way of commentary and incidental remark, to the superseded words. It has, however, been thought advisable, for the purpose of facilitating reference from the Essay to the Table, to insert in brackets the word made use of in the latter, whenever it differs from that employed in the former, and to append in notes, the explanation given to each word in the note to the table here quoted.—*Ed.*

† [*Eudæmonics.*] From a Greek word, which signifies happiness, originally, *attended by a good genius*.

For reasons already given (see § 6.,) and according to the usage, which, with great advantage, has place as above-mentioned, in regard to newly devised scientific names, the following ones are mostly taken from the Greek: explanations of them, in English, are subjoined; and that for two reasons; one is, that, among the persons to whom speculations of this kind may be not unacceptable, there may be many, to whom the Greek language is not sufficiently familiar, to render the denominations in question, in every instance, readily intelligible to them, even supposing those denominations constructed with perfect propriety; the other is, that the words will, probably, not be in every instance so well adapted to the giving expression to the intended meaning, as, with the help of a less imperfect acquaintance with the language, they might have been made.

The quantity or degree of *well-being*, experienced during any given length of time, is directly as the *magnitude* (i. e. the *intensity* multiplied by the *duration*) of the sum of the pleasures, and inversely as the *magnitude* of the sum of the *pains*, experienced during that same length of time.

In so far as the sum of the *pleasures* of all kinds, experienced by the person in question, during the length of time in question, is regarded, as *considerable*,—the sum of the *pains* of all kinds, experienced by him during that same length of time, being, moreover, laid out of the account,—the state which in that respect he is regarded as being in, is termed a state of *happiness*.

In so far as the sum of the pain of all kinds experienced by the person in question, during the length of time in question, is regarded as considerable, the sum of the *pleasures* of all kinds, experienced by him during that same length of time, being, moreover, laid out of the account, the state which, in this respect, he is regarded as being in, is termed a state of *unhappiness*.[a]

[a] Any person, to whom this account of *happiness* fails of being satisfactory, may find a very different one given by *James Harris*, in that one of his "*Three Treatises*," published together in one octavo volume, which takes *Happiness* for its subject and its title; but from no part of which would any person suppose, that any such dark spot as that of *unhappiness* is anywhere to be found.

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any of its modifications, possess any claim to man's regard.*

Eudæmonics being the name for the universally practised *art*, the *pursuit of happiness, being* in some of its various shapes, will be allowed to be an indispensable *means*, without which the object of that art cannot in any instance be pursued and attained. *Sensitive being* is the only *seat* of happiness: *being*, in that and other shapes, is the universal *instrument* of happiness. To the attainment of happiness in any shape or degree, an acquaintance, more or less considerable, with the *seat* of happiness, and with such *beings* as, in each instance, afford a promise of serving in the character of *instruments* of happiness, is more or less conducive, or even necessary. For the designation, of whatsoever portion of science may be regarded as capable of being attained, concerning *being* taken in its utmost conceivable extent, the word *Ontology* has, for ages, been employed.

Eudæmonics is the art of *well-being*. Necessary to *well-being* is *being*. In every part, therefore, of the common field, concomitant and correspondent to *Eudæmonics* considered as an *art*, runs *Ontology*,† considered as a *science*.

For the expressly declared *subject of division*, let us take the *science*: art and science running along everywhere together, every division performed on the one, may, on any occasion, be considered as applying to the other.

By means of this joint consideration, as often as, on looking at the name of a branch of art and science as it stands in the Table, we come to consider its *nature*, our attention will be pointed to the only source and measure of its *value*.

Familiar as is the name Ontology, the idea commonly attached to that appellation has hitherto been subjected, by usage, to a restriction, which is not exactly conformable, either to the present purpose, or even to the etymology and original signification of the word, as above. The case is, that, by all those philosophers, by whom, under this name, any instruction has been undertaken to be given, those properties alone have been either considered, or professed to be considered, which have been regarded by them as incident to *all* beings without distinction: such as *actuality, possibility, necessity, impossibility, probability, improbability, certainty, simplicity, compositeness*, power of *causation, derivation* from a cause, and so forth.

Coenoscopic‡ and *Idioscopic*,§ by succes-

* The *summum bonum* is a fruit of the tree of *pure good*, upon the taking of which into his mouth, a man experiences at one and the same time every pleasure of which in the nature of a sensitive being he is susceptible, each in the highest degree; pains of all sorts at the same time keeping aloof, so long as this precious fruit remains in any part of the *primæ viæ*.

It is the kernel of that fruit, of which the *philosopher's stone* is the shell. It was lately found by Baron *Munchausen*, in the Island of *Medemusia*, after a careful search made, in pursuance of the directions given by *Aristotle*, *Plato*, and *Cicero*, in whose philosophical repasts,—as in the codes of those universally admired masters of ethical science, anybody may see,—it formed a constant article.

By *Cicero*, in his Tusculan Questions, it has been made plain, to the perfect satisfaction of his *Auditor*, (a most perfectly well-bred young gentleman, whom he introduces to us by that name,) that *pain is no evil*. But the truth is, as the *philosopher* confessed to the *Baron*, that, during the whole of this dialogue, they were both of them chewing the *summum bonum nut*, to which the *areca*, even when wrapped up in the *betel* leaf, forms a very inadequate substitute. The consequence was—that, all that time, to the philosopher and his agreeable young friend, pain was no evil, whatsoever it may have been, and be about to be, to the vulgar of that and other ages.

† [*Ontology.*] From two Greek words:—one of which signifies *being* in general; the other, *an account*:—an account of *being* in general.

‡ [*Coenoscopic.*] From two Greek words: one of which signifies *common*—things belonging to others in common; the other *looking* to. By *Coenoscopic ontology*, then, is designated that part of the science, which takes for its subject those properties, which are considered as possessed in common by all the individuals, belonging to the class which the name *ontology* is employed to designate: i. e. by *all beings*.

In the word *Coenobite*—less properly spelt *Cenobite*—the first of these words has already a footing in the language. In the words *microscope, microscopic,—telescope, telescopic,*—and several others designative of philosophical instruments,—the termination—*scopic* is become perfectly familiar.

The termination *-scopic*, in what cases shall it be employed in the formation of the appellative?—On the one hand, in many instances it is either indispensably necessary, or at least highly conducive, to the intelligibility of the word; on the other hand, in every instance it adds to its length, and in some instances would probably be found to render it too unwieldy for use.

Cases, in which it will (it is supposed) be found indispensably necessary to complete the intended signification, are as follows: viz. 1. *Mesoscopic*, as applied to *Eudæmonics*: 2. *Morphoscopic*, as applied to *Posology*: 3. *Abioscopic*, as applied to *Physiurgic Somatics*: 4. *Embioscopic*, as applied to ditto: 5. *Pathematoscopic*, as applied to *Pneumatology* or *Pneumatics*: 6. *Thelematoscopic*, as applied to ditto: 7. *Esoscopic*, and 8. *Exoscopic*, as applied to *Ethics*:—for the etymology and explanation of all which, see the ensuing pages.

Cases, in which it may be dispensed with, whether as being altogether unnecessary, or as being less indispensably necessary, are those, in which the import, intended to be conveyed by it, may, without difficulty, or with little difficulty, be understood to be expressed by the more customary terminations—*logy* and *logical*, or the still shorter, though less expressive, termination, *ics*.

Instances of terminations already in use are, 1. *Physics*, 2. *Mechanics*. 3. *Pneumatics*. 4. *Mathematics*. 5. *Statistics*. 6. *Ethics*. 7. *Politics*—and various others. In *Logic*, the final *s* has, for this long time, been omitted.

§ [*Idioscopic.*] From two Greek words, the first

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sively attaching to the subject *Ontology* these two adjuncts, the field of art and science may thus be divided, the whole of it, into two portions; in one of which, viz. the *coenoscopic*, shall be contained the appalling and repulsive branch of science, to which the no less formidable, and to many a man intensely odious, appellation of *metaphysics*, is sometimes also applied; while to the other, viz. the *idioscopic*, all the other branches of art and science, may, without distinction, be consigned.

Division the 1st. Division of Ontology into 1. *Coenoscopic*, and 2. *Idioscopic*.

Matter and *mind*—into these two portions, *being* in general, considered as an aggregate, is wont to be considered as divided. Hence arises,

2. Division the 2d. Division of Idioscopic Ontology into *Somatology*,* or *Somatics*, and *Pneumatology*,† or‡ *Pneumatics*, synonyms *Psychology* and *Psychics*.§

In the consideration bestowed upon *body*, the mind may confine itself, or not confine itself,

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of which signifies *peculiar*. In *Idioscopic Ontology*, then, we have that branch of art and science, which takes for its subject such properties, as are considered as peculiar to different classes of beings: some appertaining to one such class, others to another.

In the words *idiom*, *idiomatical*, *idiosyncrasy*, and a few others, though none of them in any very common use—this word has already a footing in the language; a footing, better known in some instances than in others.

Coenosyncratocoscopic and *idiosyncratocoscopic* might be somewhat more expressive, but would be too long-winded. *Coenosyncratic* and *idiosyncratic* would scarcely be equally expressive:—*syncratic*, from *syncrasis* i. e. *commixture*, *composition*, *constitution*.

* [*Somatology*.] From two Greek words, the first of which signifies *body*, *matter*, or *corporeal substance*.

† [*Pneumatology*.] From two Greek words: the first of which (πνευμα) signifies *spirit*, i. e. *incorporeal substance*, in the sense in which it is used as synonymous to *mind*: in their original sense, the Latin as well as the Greek word corresponding to the English word *breath*. In the New Testament, αγιον πνευμα is the name, employed in the original, in designating the object, for the designation of which, in the English version, the compound appellative *Holy Spirit* is employed: more frequently (according to a phrase, which, when, on other occasions, applied to other objects, is either obsolete, or expressive of a different class of beings or supposed beings) *Holy Ghost*. In this sense, *pneumatology* and *pneumatics*, as well as *psychology*, are already in use: though more upon the continent than in Britain.

If, on this occasion, and in this sense, the word *pneumatics* were employed, it would need to cease being employed in the sense in which it is at present wont to be employed: viz. that in which it designates the branch of art and science, which has for its subject *bodies in general*, considered as being in the state, which, since *Chemistry* has become a science, has been termed the *gaseous* state. [In the Table the alternative word Pneumatics is not employed. In the original edition the following explanation of the omission is given, accompanied by a statement that the Table was completed subsequently to these notes. "To *Pneumatology*, *Pneumatics* could not here be added, as *Somatics* is to *Somatology*—Why?—Because *Pneumatics* is at present much more commonly used in an acceptation comparatively limited: an acceptation, appertaining partly to *Mechanics*, partly to *Chemistry*, both of them branches appertaining to *Somatology*, or say *Somatics*—the condivident branch correspondent and opposite to that, for the designation of which the word *Pneumatology* is here employed."—See p. 62, Note *.]

By the name of *materialists*, stand distinguished a set of philosophers, of whom *Priestley* was one, according to whom there exists not any such created being as a *mind* distinct from matter: for that *that* which is called *mind* is but an assemblage or collection, of the sort of fictitious entities called *properties*, with which certain species of *matter* are endowed. One of the grossest imperfections, that could be chargeable upon any Encyclopedical system, would be found to attach upon it, if, by the unnecessary assumption of any proposition, which by any class of men were regarded as false, the effect of it were to render itself so far: *i. e.* with reference to that class of men, unfit for use.

To the use of this class of philosophers, this division may be sufficiently accommodated by a very slight change of phrase, as thus:—To *pneumatology* belongs the consideration of such bodies or portions of matter, as are endowed with the aggregate mass of properties collectively styled *mind*, considered in relation to those same peculiar properties.

‡ [*or*] On this occasion,—as on every other on which *certainty* is an object,—an imperfection, attached to the English language, presents a very distressing impediment. It consists in the ambiguity inherent in the import of the conjunction *or*. Inserted between two words,—noun-substantives suppose,—it is employed with equal frequency, and without any the least discrimination, for two purposes altogether different: and is thus continually liable to give rise, either to interminable uncertainty, or to any the most delusive and most mischievous misconceptions. The one is—that of giving to understand that what is meant to be said of the thing signified by the one, is not meant to be said of the thing signified by the other: the other, that they are but two words for one and the same thing: not to speak of a third case, in which the option is meant to be given between two things, for the designation of which the two words are employed. In other words, it is employed in either of the two so widely different senses, distinguished by the grammarians of classical antiquity, and, after them, by *Harris*, in his *Hermes*, by the two *adjuncts*, *disjunctive* and *sub-disjunctive*: *disjunctive*, when the two words are meant to be exhibited in the character of names of two different things; *sub-disjunctive*, when they are meant to be represented as different names of one and the same thing.

A more frequently occurring, or a more frequently pernicious, imperfection will not easily be found in any language.

From this great blemish, the Greek language, as

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§ From a Greek word which signifies a butterfly, and (probably from thence) the soul of man.

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to that property which belongs alike to all *body*, and even to every determinate portion of *space* unoccupied by body, viz. *quantity*. Hence arises

Division 3d. Division of *Somatics* into *Posological** [Pososcopic] Somatics, and *Poiological*† [Poioscopic] Somatics. To avoid an inconvenience above brought to view, for an equivalent to *Posological Somatics*, may be employed the single-worded appellative *Posology*.

In the consideration of *quantity*, that of *figure* may be either taken into account or neglected. Hence arises

Division 4th. Division of Posology into *Morphoscopic* ‡ Posology, and *Alegomorphic* or Alegomorphous § Posology. By *Morphoscopic* Posology is denoted the same branch of art and science, for the designation of which the not altogether *unexpressive*, yet but *inadequately expressive*, term *Geometry* is the word in use.

In so far as it is without relation to *figure* that quantity is considered, the only diversification of which it is susceptible, is of that sort, for the expression of which the several modifications of which *number* is susceptible are employed. By *Alegomorphic* or *Alegomorphous Posology*, is here designated the same branch of art and science, for the designation of which the single-worded and adequately expressive appellation *Arithmetic* is the word in universal use.

Of a quantity, for the designation of which no more than one numerical figure,—or one line of such figures, no matter how long, so it be an uninterrupted one,—is employed, the amount is considered *as known*: i. e. by itself; the conception of it being, in so far as it is capable of being conveyed, conveyed in a *direct* way, and without need of the intervention of any other set of signs, to the mind of every person, by whom the import of those same figures, placed in that position with relation to one another, is understood.

Of a quantity, for the designation of which any two or more such lines of *numerical* figures, or one or more single figures, together with one or more such lines of figures, are employed, the amount is not, in a *direct* way, as yet known: for practical purposes it is not sufficiently known, until the *composite* expression, composed as above, has been transformed, or *translated* as it were, into a *simple* expression, consisting, as above, of some one single numerical figure, or some one single line of numerical figures, the elements of which are free from all such interruption as is produced by the interposition of any other sort of sign. To substitute to any other more complicated mode the simple mode of notation thus described, is what every operation of simple arithmetic has for its object.

In and for the designation of *numbers*, a convenience has, comparatively speaking, of late years, been found in the employing, in addition to numerical figures, and even on some occasions, or during some part of the operation, in lieu of numerical figures, signs of another kind, not varying in their signification, according to the order in which they succeed one another, in the same way as do the component elements of a line of numerical figures: of these newly devised signs, such as are capable of being ultimately translated into those which are composed of numerical figures, have, for a

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observed by *Harris*, is altogether free: it has one word for the *disjunctive* sense, and another for the *sub-disjunctive*.

Even the French language either is already exempt from this imperfection, or at any rate, with comparatively little difficulty, might be rendered free from it. *Ou*, or *ou bien*, it is believed, is *the* diction, or at any rate *a* diction employed, where the purpose is to present to view the *disjunctive* sense: employed it assuredly is in this sense, and, it is believed, seldom if ever employed in the other: while, when put between two substantives, *soit* is indubitably employed in the sub-disjunctive sense, and seldom if ever, it is believed, in the disjunctive.

In English, if *or*, being confined to the disjunctive, *or say* were the diction employed, and that exclusively, where the sense meant to be presented is the *sub-disjunctive*,—a blemish, so incompatible with certainty and clearness of conception, might thus be removed. But supposing the improvement were ever so desirable, how the introduction of it could be effected seems not very easy to conceive. The inconvenience of departure from habit is an inconvenience, which, in such a case, would be felt by every body: by every body, as well in the capacity of *speaker* or *writer*, as in that of *hearer* or *reader*.

The uneasiness produced by a violation of the law of custom, in matters of discourse, is an inconvenience to which everybody, without exception, is more or less sensible: want of precision—want of certainty—is an inconvenience to which, though in many cases so much more serious than the other is in any case, few indeed are sensible.

For this same purpose—viz. designation of the sub-disjunctive sense, the Latin word *alias*—a word already applied to this same purpose—would serve full as well, were it not for the displeasing idea attached to it by the use made of it on the occasions on which it is employed, in speaking of this or that man of bad character, who, to elude justice, has, at different times, assumed different names. For conveying to the eye the import in question, the well-known letters, *i. e.* might in some measure be made to serve: but *id est*, of which they exhibit the abbreviation, is crude Latin: and the correspondent English phrase would be felt to be insufferably long.

* [*Posology.*] From two Greek words, the first of which signifies *quantity*.

† [*Poiology.*] From two Greek words, the first of which signifies *quality*.

‡ [*Morphoscopic.*] From two Greek words: the first of which signifies *shape*, *form*, or *figure*; the other *regarding*: from the first comes the English word *metamorphosed*—*changed* in respect of *figure*.

§ [*Alegomorphic.*] From two Greek words: the first of which signifies *disregarding* or *not regarding*; from the other comes the English verb *to metamorphose*.

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long time past, universally and exclusively been composed of the letters of the alphabet. But by none of these recently employed signs can any quantity ever be expressed in a *direct* manner: in any other manner than by reference to some single numerical figure, or line of numerical figures, ranged in arithmetical order, as above. Hence arises

Division 5th. Division of *Alegomorphous* posology, into *Gnosto-symbolic*,* or say *Delo-symbolic*,† and *Agnosto-symbolic*, or say *Adelo-symbolic*:‡ *Gnosto-symbolic* or *Delo-symbolic* being the term employed for the designation of the branch, for the designation of which the term *common Arithmetic* is in use to be employed, *Agnosto-symbolic*, or *Adelo-symbolic*, is the term, employed for the designation of that, for the designation of which the inadequately expressive composite appellation *Algebraical Arithmetic*,—or, much more frequently, the single-worded and completely unexpressive appellative *Algebra*,—is employed.

II. To return to *Poiological Somatology* [Poioscopic Somatics,] or *Somatology* at large. —Where bodies are considered, it may be either *with*, or *without*, reference to any operation, performed upon or in relation to them, by human *art*, by the help of human *science*. Hence arises

Division 6th. Division of *Somatology*, or *Somatics* at large, into *Physiurgic*§ [Physiurgoscopic] and *Anthropurgic*‖ [Anthropurgoscopic.] This division has for its source the consideration of the absence or presence of human art and science, applied to the purpose either of discovering *latent* properties already belonging to the subject, or of investing it with new ones. *Physiurgic Somatology* has for its synonym the above-mentioned *mis*expressive appellation—*Natural History*.

Anthropurgic Somatology has for its synonym the still more flagrantly and perplexingly *mis*expressive appellation *Natural Philosophy*, taken in one of the two or more different degrees of extension, which, as above, have been given to it.

Applied to *bodies*, alias *portions of matter*, in their *natural*, or say *physiurgic*, state, *human art*—or say *elaboration by human art*—has two distinguishable objects: sometimes it is to the one, sometimes to the other, sometimes to both, that it is directed. These are, 1. The discovery of such properties, as—already, and before it has, by the application of human genius and industry, been endued with any new properties—it is in possession of, having been put in possession of them, as it were, by the hand of *Nature*: 2. The giving to it, in addition to, or instead of, any such properties as it is found endued with by the hands of Nature, some *new* property or set of properties.

Intimately connected, and, in many instances, inextricably blended and intermingled, are, it is evident, these two functions: the detection of an *already existing* property or set of properties, being very often a *condition precedent*,—and always, in so far as it affords suitable indications, an encouragement,—to the engaging in any such operations as are found conducive to the faculty of investing the subject with *new* ones.

Of *Physiurgy*, alias *Natural History*, the object and business is—to discover and observe the properties possessed by objects, in the state into which they have been brought by the powers of unassisted *Nature*. But, to the bringing them for that purpose to view, and presenting them in a state as little changed as may be, *new* properties are, in many instances, requisite to be given to them: nor, in general, would the labour necessary to the accomplishment of this purpose be bestowed upon them, but in the view of investing them with *new* properties:—properties, by which they will be brought into some state or other, better adapted to human use, than any, into which they had been brought by the hand of *Nature*.

Division 7. Division of *Physiurgic Somatology*, or say *Physiurgics* into *Uranoscopic*¶ and *Epigeoscopic*** *Physiurgics*.

Uranoscopic Physiurgics has for its single-worded synonym the adequately expressive appellative *Astronomy*.

Division 8. Division of *Epigeoscopic Physiurgics* into *Abioscopic*†† and *Embioscopic* ‡‡

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* [*Gnosto-symbolic.*] From two Greek words: the first of which signifies *known*; the other, *a sign*, or *belonging to a sign*.

† [*Delo-symbolic.*] From two Greek words, the first of which signifies *manifest*, or manifestly known.

‡ [*Agnosto-symbolic.*] [*Adelo-symbolic.*] Prefixed to a word, the Greek particle *a* frequently, as in these cases, is significative of *negation*:—of the *negation*, for example, or *absence* of any quality, to the denomination of which it is prefixed.

§ [*Physiurgic.*] From two Greek words; the first of which signifies *nature*; the other, *work*, or *belonging to work*: the art and science which has for its subject those properties, the *production* and *display* of which are the work of nature alone, unmodified by the intervention of human genius and industry. In several instances, the termination formed by the latter word is, in this same sense, already in the language: viz. in *chirurgy* (from whence *surgery*,) *energy*, *liturgy*, *metallurgy*, *theurgy*.

‖ [*Anthropurgic.*] From two Greek words; the first of which signifies *Man*:—the art and science, which has for its subject those properties, either the *production* or the *discovery* and *display* of which, are the work of human genius and industry.

¶ [*Uranoscopic.*] From two Greek words, the first of which signifies *heaven*, or say *the heavens*.

** [*Epigeoscopic.*] From three Greek words: the first of which signifies *upon*; the second, *the earth*.

†† [*Abioscopic.*] From two Greek words: the first of which signifies *that which has not life*.

‡‡ [*Embioscopic.*] From two Greek words: the first of which signifies *that which has life*.

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Physiurgics: say *Abioscopic* and *Embioscopic Epigeoscopics*.

Abioscopic Physiurgics has for its synonym the adequately expressive and single-worded appellative *Mineralogy*.

Division 9. Division of *Embioscopic Physiurgics* into *Azooscopic*,* *Azoologic*, or *Azoic*, and *Zooscopic* or *Zoologic* Physiurgics.

Azooscopic Embioscopics has for its synonyms the adequately expressive and single-worded appellations already in use—*Botany* and *Phytology*.

Zooscopic Embioscopics has for its synonym the adequately expressive and single-worded appellative already in use—*Zoology*.

Beyond this point, no adequate advantage seems to be promised, at least on the present occasion, by the task of carrying on, in this direction, that track of *dichotomous* or *bifurcate* division, which, at the expense of much labour to the workman,—and not less perhaps to the small number of *amateurs* that can reasonably be looked for,—has thus far been persevered in. By the words *Zoophytology*, *Entomology*, *Erpetology*, *Ichthyology*, *Ornithology*, *Tetrapodology*, and *Amphibiology*, having for their respective subjects, *Plant-Animals*, *Insects*, *Reptiles*, *Fishes*, *Birds*, *Beasts*, alias *Quadrupeds*, and *Amphibious*, alias *Land-and-Water Animals*,—so many divisions of *Zoology* have for this long time actually been, or, in virtue of powers granted by *Analogy*, may, at any time, be in use to be designated.

Division 10. (1.) Division of *Anthropurgics*, or say *Anthropurgoscopic Somatology* or *Somatics*, into *Coenoscopic*† or *Phanerodynamic*‡ *Anthropurgics*, and *Idioscopic* § or *Cryptodynamic* ‖ *Anthropurgics*.

Coenoscopic or *Phanerodynamic Anthropurgics* has for its single-worded synonym the inadequately expressive appellative *Mechanics*: viz. when taken in the most extensive sense of the word, i. e. that in which it is employed to include whatsoever portions of *Anthropurgic Somatics* are not comprehended within the domain of *Chemistry*.

Idioscopic, or *Cryptodynamic Anthropurgics*, has for its single-worded synonym the unexpressive appellation *Chemistry*.

The properties, of which *Mechanics*—or, as the phrase is, *Mechanical Philosophy*—takes cognizance, are for the most part such as belong to *all* matter, taken in all its *forms* and *species*; by this circumstance it is that this branch of Art and Science is entitled to the appellation of *Coenoscopic Anthropurgics*, or *Somatics*.

These properties are, moreover, in comparison with those which belong to the subjects of the other just-mentioned branch, *manifest*, or say *conspicuous*, of themselves; not requiring the aid of human art to bring them out to view: in this circumstance it is that this same branch founds its title to the appellation of *Phanerodynamic*.

These properties being mostly, if not altogether, such as, in the common course of scientific language, come under the denomination of *powers*; hence, in speaking of this division of art and science, it has been thought that, on this occasion, a word corresponding to *powers* might, by contributing to clearness of apprehension, be not altogether without its use.

The properties, of which *Chemistry* takes cognizance, are for the most part, such as belong, not to all matter, nor to matter in *general*, but to this or that *particular* species of matter, as distinguished, each of them from the rest, by such a collection of these properties as, taken in the aggregate, belongs peculiarly to itself. By this circumstance it is that this branch of art and science entitles itself to the appellation of *Idioscopic Anthropurgics*.

These properties are, moreover, in comparison with those which belong to the branch just mentioned, recondite and unconspicuous; requiring—to the *production*, and, in some instances, as it were, to the *creation* of them—more or less of human art and elaboration, consisting chiefly in *mixture*, and in the application of different degrees of *temperature*: changes, which, in so far as the phenomena of *heat* and *cold* are considered as being the result of the absence or presence, the influx or efflux, of a particular species of matter, termed *caloric*, or the matter of *heat*, may also be considered as referable to the head of *mixture*.

Accordingly, in the adequately expressive appellative, *Mixiology*, or *Symmictology*, should any clear advantage be ever found derivable from the use of it, the originally unexpressive term *Chemistry* might at any time find an equally single-worded, and by no means unexpressive synonym. ¶

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* [*Azooscopic*.] From two Greek words: the first of which signifies that which has not *animal*, i. e. *sensitive* life.

To *azooscopic* might be added, for a synonym, *anæsthesioscopic*; and to *zooscopic*, the correspondent synonym, *æsthesioscopic*. *Anæsthesioscopic*, from two Greek words: the first of which signifies that which is not endowed with *sensation*, i. e. *feeling*. The word *æsthetics* has already a footing in modern language, and even in the English: though as yet not so much employed in the English as in some of the *continental* languages, particularly the *German*. It is used to signify the doctrine concerning what belongs to *taste*: viz. as applied to literary composition, and the arts called *Fine Arts*:—*feeling*, principally of the *mind*, considered as applied to the productions of those arts.

† [*Coenoscopic*.] See above, note †, p. 83.

‡ [*Phanerodynamic*.] From two Greek words: one of which signifies *conspicuous*; the other, *power*. The word *Dynamics*, as applied to designate a branch of Mechanics, is already in use in modern languages; ex. gr. in the *English*, but not so much so as in the *French*.

§ [*Idioscopic*.] See above, note §, p. 83.

‖ [*Cryptodynamic*.] From two Greek words: the first of which signifies *latent* or *unconspicuous*.

¶ By the word *Crasiodiæresics*, a more ade-

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Division 10 (2.) Division of *Anthropurgics* into *Anapirical*, or *Anapiric*,* and *Catastatical*, or *Catastatic*,† [Catastatico-chrestic.‡]

This division has for its source the application or non-application of those newly discovered or created properties, which *Art*, in conjunction with *Science*, has had for its fruits, to the purposes of *common life*, through the medium of *commercially established Art* and *Manufacture*: *Art* and *Manufacture*, established upon such a footing that their produce is become an object of commerce.

Anapirical Anthropurgics has for its synonym the familiar compound appellative *Experimental Philosophy*.

Catastatical, or *Catastatic* Anthropurgics, has for its synonym the expressive, already established, and not altogether unfamiliar, appellative *Technology*.§

This tenth division, it is manifest, is not with reference to the last preceding one, *subordinate*, but *co-ordinate*: the aggregate being in both cases the same; only the *source*, from which the principle of division is derived, different.

It comprehends accordingly, and with equal propriety applies itself to, the *mechanical* branch and the *chemical*.

The demand, which in practice, there seemed to be for this division, viz. Experimental Philosophy and Technology being considered, the appellatives, which constitute the two branches of it being already in use, a place in this sketch could not be refused to it. True it is that, from the first of these ideal receptacles, as the newly produced fruits of art and science are converted into articles of commerce, individual objects are continually passing into the second; but of the appellations respectively given to the receptacles themselves, the propriety remains unchanged.

Beyond this point in the line of *bifurcate* division, there seems not, at present at least, any adequate use, in carrying on the investigation in this direction. Of the genus *Mechanics*, the species, according to a list more or less approaching to completeness, will be found ranged in a vertical line in a column of Table I., and so of the genus *Chemistry*.

III. To return to *Pneumatology* or *Pneumatics*.

Division 11. Division of *Pneumatology* into *Alegopathematic* ‖ [Nooscopic¶] and *Pathematoscopic*** [Pathoscopic.††]

Alegopathematic, or say *Alego-æsthetic* Pneumatology has, for its single-worded synonym, the not unexpressive appellation *Noology*.‡‡

It has for its subject *spirit* or *mind*, considered apart from all *feeling*, whether of the pleasurable or painful kind: considered that is to say with reference to the purely intellectual part of the animal frame; including *simple perception*, *memory*, *judgment*, *reasoning*, *abstraction*, *imagination*, &c.

Pathematoscopic Pneumatology may have for its synonym *Pneumatic*, or *Psychological* ‖‖ *Pathology*.

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quately expressive—and, though a compound, yet still a single-worded appellative—might be afforded. By it, in addition to *mixture*, *decomposition* would be designated: and, of a chemical operation, even without mixture, decomposition is sometimes the result.

* [*Anapiric.*] From a Greek word, which signifies *experimental*. *Empiric*,—a word, the signification of which was originally the same,—has, in modern languages, and in particular in the English, been long in use. By having been confined in its application to the designation of medical practitioners,—and, among medical practitioners, to those who are considered as making experiments on the bodies of patients, without taking for the ground of such their practice, any sufficient stock of scientific information,—thus it has happened, that the word *Empiric*, how proper soever in its original acceptation, is in any other than that dyslogistic, i. e. condemnatory one,—and in particular in the one here in question,—become unfit for use. Hence came the necessity of having recourse, as here, to the word *anapiric*:—a word which, no less than *empiric* has place already in the Greek language.

† [Catastatical or *Catastatic.*] From a Greek word, which signifies *established*.

[‡ Viz.—Established use affording.]

§ [*Technology.*] From two Greek words, the first of which signifies *art*. The word *technical*—*belonging to art*—has long been in the language. The word *Technology* has for many years had place in modern languages, and is come into use even in the *English*, though not so much so as in some of the *continental* languages.

‖ [*Alegopathematic.*] Sensitive-faculty—not-regarding; from two Greek words: the first of which, as above, signifies *to pass by unnoticed*; the other, *sensation*, *feeling*, or *affection*.

[¶ Synonyms, *Alegopathematic*, as above; and *Alego-æsthetic*, taste or feeling not regarding.]

** [*Pathematoscopic.*] From two Greek words: the first of which signifies *sensation* or *feeling*, as above.

[†† Synonyms, *Pneumatic Pathology*, *Psychological Pathology*.]

‡‡ [*Noology.*] From two Greek words: the first of which signifies *mind*, and in particular the *intellectual* part. Though the word thus compounded has not yet found its way into the body of the language, yet among literary men, and in particular in the universities, the first of its elements *nous* has for many years been in use, though rather in a jocular and purely colloquial, than a serious and regularly established sense. A man is said to have some *nous*—or to be not altogether devoid of *nous*—i. e. *understanding*—*intelligence*.

‖‖ [*Psychological.*] From two Greek words: the first of which signifies *the soul of man*; though, probably enough, it began to do so, not till after it had for some time signified a *butterfly*. The word *psychology*, though more in use on the continent than in England, is already in the English dictionaries. *Animula, vagula, blandula*, &c.—"Little foolish, fluttering thing"—was the celebrated address, made, on his death-bed, to his own soul, by the Emperor Adrian, to whose mind the original signification of the word *psyche* seems, on that occasion, to have presented itself.

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Division 12. Division of *Pathematoscopic*, [Pathoscopic] *Pneumatology*, or say *Pneumatic* or *Psychological Pathology*,* into *Aplopathematic*,† [Aplopathoscopic,‡] and *Thelematoscopic*.§

Aplopathematic Pneumatology or *Pathology* has for its subject the aggregate of *Pleasures* and *Pains* of all kinds, considered apart from whatsoever influence, in the character of motives, the prospects of them may have upon the *will* or *volitional* faculty, and the *acts*, as well purely *mental* and *internal*, as *corporeal* and *external*, of which those prospects may become the *causes*.‖

Proceeding from the consideration of the nature of the *end*, the first division might be into *Odynothetic* and *Hedonosceuastic*, or say *Hedonistic—pain-repelling* and *pleasure-producing*.

Widely distant as pain and pleasure are from one another in their extreme degrees, not only in their nearest degrees do they run one into another undistinguishably, but, in some instances, to an indefinite extent, by one and the same individual operation, by which the one is excluded, the other is produced. But this is a difficulty which, throughout the whole field, the labours of the logical tactician have to encounter at every step; nor does the nature of things admit of its being either avoided or removed.

Under *Odynothetics*, one obvious source of division is the nature of the *source*, from which, immediately or more or less remote the pain may be found to flow; and here the distinction between the work of unassisted *Nature* and the work of *Man* would again find place.

Considered as being purely the work of *Nature*, Pain will have its immediate source, either *within* the precincts of the body afflicted with it, or *without* those precincts. Considered as having its source *within* the body, it may be referred to *disease*; and under the name of *Hygiantics*, the branch of art and science, which employs itself in combating that affliction, may, together with those branches which presented themselves as subservient to this principal one, be seen already held up to view, though without any attempt at systematic order, in Table I.

Considered as having its source *without* the body, pain will be found referable either to the head of *calamity*, purely *physical calamity*, or to that of *delinquency*.

As to the *means immediately* employable for combating pain, considered as having calamity for its source, these will, of course, be different, according to the nature of the particular calamity, and will accordingly be referable to different branches of art and science. But, in so far as *power—political power*—is, in a less immediate way, employed in causing application to be made of those means, the subject belongs to the ensuing head of *Politics* or *Government*, and there-under to one of the sub-branches of the branch termed *Police*.

In so far as the affliction is considered as having its source in *delinquency*, the art and science to which it belongs is also *Government*, of which in the text.

For the subject of *Hedonistics*, two obvious sources of division present themselves: one is the *seat* of the pleasure in question; the other, the *channel* or *inlet*, through which it is *let in* to the mind.

The *seat* will either be, in virtue of the whole of the nervous system taken together, the whole of the bodily frame, or, in a more particular manner, this or that particular organ, or other part. To the first of these heads belong the means employed to the opposite purposes of *calefaction* and *refrigeration*: both concurring in confining the quantity of *caloric* diffused through the body within those bounds, within which bodily comfort is among the fruits of it.

To this same head belongs, in the next place, the consideration of the various *instruments*, by the application of which that state of the nervous system which, in its several modifications, may be com-

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* [*Pathology*.] From two Greek words: the first of which signifies *feeling* or *sensation*. It has long been in the English language, though not often employed in any other than a *medical* sense: in which case the import of it is seldom extended beyond that of *bodily sensation* or *feeling*, considered with a view to some *disorder* with which it may be supposed to be connected.

† [*Aplo-pathematic*.] From two Greek words: the first of which means *simple*,—relating to the thing in question and nothing else;—the other, *sensation* or *feeling*, as above.

[‡ Mere-sensation-regarding, in which is included *Æsthetics*, the science of what regards taste. *Vide supra*, note *, p. 87.]

§ [*Thelematoscopic*.] From two Greek words, the first of which denotes the faculty of the *will*—the *volitional* faculty—as contradistinguished from the *intellectual*. It seems wonderful, that, neither from the Greek, nor from the Latin, a word so continually in demand as the substantive *will* should have any *conjugate* in the shape of an *adjective* belonging to it. The adjective *volitional*, derived by analogy from the substantive *volition*, is not in *Sheridan's* English Dictionary, nor, probably, in any other; instead of it may be found the word *volitive*, a word which is not at all in use, nor is, by a good deal, so nearly allied in sound.

‖ [*Aplopathematic Pathology*.] Either from the genus *Technology*, or from the genus *Aplopathematic Pathology*, the process of ramification might have been carried on further to an indefinite length. But, on the present occasion, in consideration partly of the quantity of labour, which, in case of any such formal continuation, would, on the part of the author, have been necessary, partly of the largeness of the draughts which it would have been necessary to make on the patience of the reader—at this point it has been deemed most advisable to stop.

Beyond this point it seems as yet matter of uncertainty, whether it would be worth while to persevere in proceeding on the *exhaustive* principle.

Of these two branches, *Aplopathematic Pathology*, as being in the Systematic Sketch, with its accompanying Table, *that* to which the precedence was found necessary to be allotted, is that which, in respect of its nearer vicinity, and more obvious relation to the common end, a convenience may be seen in bringing to view, on the present occasion, in the first instance.

Under *Aplopathematic Pathology*, the *source* of ramification will be the nature of the *end*, to which the several branches of art and science issuing from it, will respectively and successively be directed: under *Technology*, it will be the nature of the *means* employed for the attainment of that end.

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has for a synonym the single-worded appellative *Ethics*,* taken in its largest sense.

In the character of synonyms to Ethics are also used, in some circumstances, the words *Morals* and *Morality*.

Division 13. Division of *Nooscopics* or *Noology*

prised under the generic term of *intoxication*, is capable of being produced.

To the other of the above two heads may be seen to belong the subjects of *Cookery* and *Confectionary*, *Liquor-making* and *Perfumery*: the term *Liquor-making* being here considered as confined to the designation of potable liquors, other than those applied to the just-mentioned purpose of intoxication.

From the nature of the *inlet*, considered as distinct from the *seat*, may be deduced any such ramifications as may be employed in presenting to view, in the first place, *gymnastic exercises* in general, exercises productive of a pleasure of which *the whole body* is the *inlet*, as well as the *instrument*: in the next place, such *games of skill*, and even of *chance*, which, no part of the pleasure afforded by them being considered as having its seat in the body, may be considered as exercises productive of a pleasure administered by, and let in through the body, to the mind.

To the branches of Art and Science, which have for their subject the above exercises, *none* of which have any special inlet, may here be added,—under the description of branches, having, for their subject, pleasures admitted respectively through their several *special inlets*,—those which are commonly designated by the collective name of the *Fine Arts*:—viz. *Music*, having for its sole inlet the *ear*; *Painting* and *Sculpture*, the *eye*; *Poetry*, affording a pleasure which finds its entrance at both those inlets.

In the case of the *Fine Arts*, two perfectly different *species*, affording commonly as decidedly distinct *degrees* of pleasure, may be distinguished: viz. that which is experienced by those, by whom nothing but the product of the operation is enjoyed, and that which is experienced by him, by whom—singly, or in conjunction with others,—the operation is performed: the first-mentioned set unlimited in multitude; the other, limited to the fortunately endowed few: the former, mere passive recipients; the other, adding in their persons to the character of passive recipients, that of active and productive instruments.

Under the name of *Somatico-Hedonistics* might be collected and comprehended, those branches of art and science which, as above, have for their objects those modifications of pleasure, which have the *body* for their seat; under the name of *Pneumatico-Hedonistics*, such as have for their objects those more refined classes of pleasures which, passing through one or more of the inlets afforded by the body, find their ultimate seat in the mind.

For *Technology*, the first division might be that which has for its source, the distinction between such instruments as are applied *immediately* to one or other, or both together, of the two all-comprehensive objects above-mentioned,—viz. exemption from pain, and perception of pleasure,—and such as are conducive to the production of those same desirable effects, no otherwise than in a manner more or less *remote*, viz. by being, in some way or other, conducive to the production of the just-mentioned immediate instruments. Of the branches thus elicited, the field upon the face of this account of it, appears to be nearly, if not altogether co-extensive and coincident, with that of *Aplopathematic Pathology*,—considered in its two branches, viz. the *Odynothetic* and the *Hedonistic*, as above-mentioned.

Materials and *instruments*—materials on which the art is exercised, and instruments with the help of which it is exercised—in the distinction between the extensive and multifarious classes of objects, thus respectively denominated, another source of division may be observed.

In respect of *vicinity to use*, the station of the *materials*, serving as subjects to the art, is susceptible of indefinitely numerous degrees. The *extreme* stations are those respectively expressed by the appellatives *raw materials* and *finished work*. Between these two extremes may be seen interposed, according to the nature of the finished work, different numbers of distinguishable *intermediate* states. As the number of these intermediate states *increases*, the *finished work* being the same, the total mass of labour, employed in the production of the finished work, has been observed to be *diminished*; diminished by the influence of causes, which, under the head of *division of labour*, have been so clearly held up to view by *Adam Smith*.

When, considered under all the modifications of which it is susceptible, the *work* has been brought into that state in which the appellation of *finished work* may with propriety be applied to it,—on taking any article of it for an example, it will be found to be either of such nature as enables it, without the intervention of any other object, to be applied in an immediate way to *immediate use*,—viz. in the way either of excluding pain or of administering pleasure, as above,—or else not to be susceptible of being applied to use in any other shape than that of *preparatory*, *subservient*, or say *instrumental* use,—viz. by being subservient to the production, or right and effective application, of some subject or subjects, applicable, as above, in an *immediate* way to use.

As there are instruments, the use of which consists in their being respectively applied in an *immediate* way; that is, each according to its nature and destination, applied without the intervention of any other, to the repulsion of pain, or production of pleasure, or to both at once, so there are others which, howsoever truly conducive to these ends, are not so in any other than an *unimmediate* way, *i. e.* by being subservient either to the production, or to the application of some instrument or instruments, coming, as above, under the denomination of immediate instruments. *Immediate* utility admits not of *degrees*; but of *unimmediate* utility, as above, degrees may have place in any number. The *scale*, to which these degrees, belong, may be termed the scale of *vicinity to use*. Instruments the station of which is on the highest degree of the scale—say the *first* degree—the degree nearest to immediate use, may be termed instruments of the 1*st order*; those, next to them, *i. e.* next below them, instruments of the 2*d order*; and so on, through any number of degrees, which, in any system of connected instruments, may, at any time, be found exemplified.

* [*Ethics.*] From a Greek word, which signifies *manner* or *manners*: manner of *conducting* one's self in the course of life.

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into *Plasioscopic** and *Coenonesioscopic* :†— *Plasioscopic*, i. e. *Formation—regarding; Coenonesioscopic*, i. e. *Communication—regarding.*

To the head of *Plasioscopic* Noology may be referred the *art of thinking*, with the correspondent science of what belongs to the formation of the matter of thought, in so far as the work of *formation* can be kept in view, and carried on in a state of separation from the work of *communication*, as applied to the same individual portion of that ideal species of matter.

To the word *Logic*, considered as the name of a branch of art and science, the conception that has been attached, seems never to have been altogether so determinate and definite as could be wished. But in *one* at least of the senses, in which it has been employed, it may be considered as the single-worded synonym of *Plasioscopic Noology*, as above characterized.

Division 14. Division of *Coenonesioscopic Noology*, or say *Coenonesiology*, into *Aplo-didactic*, or say *Didactic*, and *Pathemategeretic*, [Pathocinetic‡] or say *Egeretic*. *Aplo-didactic*, i. e. *simply information affording;* having, for the end or object of the communication in question, *that* and nothing more : *Pathemategeretic or Egeretic ;* i. e. *Affection-exciting*, or in one word *excitative*.

Of the word *Grammar*, if not exactly coextensive with, the import will (it is believed) be recognised as comprehended under, the import of the word *Aplo-didactic*, as above explained.

To the head of *Grammar* seem commonly to be referred those rules, and no others, which have for their subject, among the words employed for the communication of thought, such relations between word and word as are still the same, whatsoever may be the particular *purpose* and *occasion* of the communication, and the *nature* and *subject* of the thoughts communicated. §

To the head of *Rhetoric* seem commonly to have been referred those rules, which have for their subject the choice capable of being made of words and combinations of words, on occasions on which the communication made, has for its purpose, or in the number of its purposes, the exercising an influence on the *Affections;* on the Affections, whether considered as having place in a *calm* state, or as in that state of *intensity* and *perturbation*, in which they receive the name of *Passions.* ‖

Of materials, and instruments of all kinds, whether applied immediately or unimmediately to use, some are applicable, and accordingly applied to their respective uses, each of them by itself ; others, not but in conjunction, each of them with one or more other instruments.

Agriculture is conspicuous for the number of instances it affords of instruments which are capable of being, and are wont to be employed *single*, as above : Manufactures, taken in the aggregate, for the multitude of the instances they afford, of instruments which cannot be employed but conjunctly.

The principal characteristics, by which the systems of productive operations, commonly comprehended under the appellation of *manufactures*, are distinguished from those called *trades*, or *handicraft trades*, seem to be, the greater length to which they carry the division of labour, the multitude of the instances they afford of instruments of *subservient use*, employed *conjunctly* with each other, and the number of the different *orders* into which, as above, those instruments would be found ranged below one another in the scale of *vicinity to use*.

Raw material, or *finished work*—instrument of *immediate* use, or instrument of *unimmediate* and *subservient* use—no portion of matter can ever, or in any way be of use, until it is arrived at the *place*, which it is requisite it should occupy, in order to its being applied in that same way to use. Hence two universally concomitant modes of subserviency to use, of which, in so far as they are moveable, all useful instruments are susceptible : viz. subserviency in the way of *formation* or *application*, and subserviency in the way of *conveyance*.

To this place belongs a system of division, which, with a view to clear, correct, and all-comprehensive conception, might not altogether without advantage, in the way of instruction, be applied to the aggregate mass of the several different *instruments of conveyance;* these are (say) *stationary*, i. e. Roads ; *moveable*, i. e. *Carriages;* and so on.

In the above may be seen, though nothing like a complete list, a specimen of the various *sources of division*, by means of which, taken altogether, roads might, with no small instruction and convenience at any rate to the as yet unpractised traveller, be cut in so many various directions, through the wilderness of *Technology*.

A view of what was done in this way, by an ingenious philosopher of the 17th century, viz. *Bishop Wilkins*, though in prosecution of a design different from the present one, *his* being no less than that of substituting, throughout the whole field of language, an entire new language to all those at present in use, is intended for a separate article in this Appendix ; it contains so much of that great work as seemed to bear relation to Technology.

* [*Plasioscopic.*] From two Greek words, the first of which signifies *formation*.

† [*Coenonesioscopic.*] From two Greek words, the first of which signifies *communication*.

[‡ Passion-exciting.]

§ See the work on Grammar in this volume.

‖ Words, and assemblages of words, considered as applied or applicable to this purpose, are, in the institutional books, styled books of Rhetoric, designated by the collective name of *Figures of Speech;* but, on the list of these Figures of Speech, as designated by their respective names, several may be seen, that apply more decidedly to the *imagination* than to the *affections* ; as well as others, which, without addressing themselves to either of these two classes of psychological fictitious entities, are considered as capable of being subservient to the communication of thought, by means of *collateral associations;* i. e. by means of *accessory* ideas, which stand associated with the principal idea, with the idea, of which the word in question is directly and professedly significative, and which it was in the first instance employed to bring to view.

Works of this description—the study of which is commonly, in schools, an immediate sequel to that of the rules of *grammar*—are what the author of

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Division 15. First Division of *Ethics* (taken in the largest sense of the word) viz. into *Di-*

Hudibras appears to have had in view, where he says—

> "For all a rhetorician's rules
> Teach but the naming of his tools."

This portion of stock, marshalled as have been the contents of it by the didactic verse-maker rather than by the Logician, remains as yet, it is believed, in that original chaotic state in which, without particular examination, it seems scarcely practicable to bestow upon it any denomination, more characteristic than that of *Figures of speech*, by which it has hitherto been designated.

Between the imports, which, by even the most ancient Greek writers extant, was annexed, and from them continues to be annexed, to the words *Grammar* and *Rhetoric* respectively, the relation, which may be seen to have place, is very different from that which can not but have originally had place, if not between the words themselves, between those from which they were respectively derived. By the word *Rhetoric*, derived from the verb ῥεω to flow in a stream, which in some of its *conjugates*, though not in all, (for in this secondary sense the assemblage is far from complete,) was employed to designate the particular kind of *efflux*, distinguished by the name of *speech*, the *audible* signs of language, and none but the audible signs, were denoted: by the word *Grammar*, derived from γραφω to make *visible* or *tangible* marks, none but the visible or tangible ones.

Thus far, to judge from the undubitable etymologies of the two words, *Rhetoric* should have been the name, which, in the earliest stage of society—viz. antecedently to the invention of the visible and tangible class of signs—was employed to designate the thought-communicating art, viz. taken in the whole of its then extent, and to what purpose soever it was considered as applied or applicable. So, in like manner, from and after the introduction of those visible and tangible signs, *Grammar* should have been applied to the same field, taken in the same unlimited extent, so as in its import to differ from *Rhetoric* on no other point than that of the different species of *signs* respectively employed by the two arts.

Of the change which, upon the face of this statement, appears to have taken place between those original, and the subsequently established and still existing imports, absolute and relative, of the two words, the cause seems to be this:—Antecedent to the time at which the use of *letters* was invented in, or imported into, the cluster of nations, whose language was the Greek language, the operation of speaking to a numerous audience, on subjects of a complicated nature, and thence in discourses which continued *flowing on* as it were, to a considerable length, had in consequence of the form taken by the political constitution of some of these nations, grown into use. Ρητωρ *(Rhetor)* the man of *fluency*, was accordingly the appellation by which a man, considered as engaged in operations of this description, came to be designated.

But, on the occasion of an address, delivered on such subjects, and to such audiences, motives for exercising on the *affections*, and even on the *passions*, whether directly, or through the medium and with the assistance of the *imagination*, whatsoever influence a man was able to exercise, could never be wanting. And thus it was, that *Rhetoric*—the language of the *Rhetor*—i. e. the *Public Speaker*, came to signify, not so much speech at large, as speech considered as addressing itself, either directly or through the medium of the *imagination*, to the *affections* and the *passions*.

When, the art exercised by the public speaker having, for a length of time more or less considerable, been already in use, the signs, invented for the purpose of giving permanence to the import expressed by those audible and evanescent signs, had also, for a length of time more or less considerable, been in use, then, and not till then, it was, that those relations, for the designation of which the collective appellation *parts of speech* came to be employed, could for the first time have presented themselves to view.

To obtain over the vast aggregate, composed of the whole assemblage of the words, of which the language used by the nation in question was composed, such a command, as enabled a man to marshal them all in his mind, and lodge them, every one of them in one or other of the eight or ten classes, having for their collective denomination the many-worded appellative *parts of speech*, was an enterprise, such as could scarcely have been projected, much less executed, without the benefit of that assemblage of permanent and everlasting signs, which, in every combination they are susceptible of, are capable of being kept in a steady position during any required length of time, under the corporeal, and thence under the mental eye.

And, in the progress of the art of *Education*, thus it was, that to instruction in the art of perceiving the import, and tracing the forms, of these visible and tangible *characters*, came by degrees to be added instruction in the nature of those *relations*, between their respective imports, in contemplation of which the whole body of the words, of which a language is composed, is divided and distributed among the parts of speech.

In the institutional works on this subject, derived by us, whether immediately, or through the medium of the Latins, from the Greeks, a division made of Grammar is into *Orthoëpy* and *Orthography*:—*Orthoëpy*, the art of performing the operation of speaking, in the *right*, i. e. in the *customary* mode; *Orthography*, the art of performing the operation of *writing* in the correspondently right mode.

Considered merely as *operations*, first of the two, as above, came *speech*, then, and not till after an interval of indefinite and unmeasurable length, *writing*. But considered as *arts*, to the exercise of which *aberration* from a standard, and thence *rectitude* (the absence of aberration) were incident, first must have come (if the above observations be well grounded) *Orthography*, the art of *writing*, and not till after *that*, the art of *speaking* correctly, viz. according to the *usages* to which expression had been given, in and by the rules of *Grammar*.

The word *Rhetoric* having thus two considerably different significations, the one, original and unbounded; the other, derivative, comparatively modern, and comparatively narrow: the one designating the operation of speech, taken in its whole extent; the other, the art of speech considered no otherwise than as applied to the particular purpose of exercising, *occasionally*, through the medium of the *imagination*, influence over the *affections* and the *passions*, no wonder if, in works having for

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castic,* i. e. *Censorial*, and simply *Exegetic*,† i. e. *Expository*, or *Enunciative*. *Dicastic*, or *Censorial*, i. e. expressive of a judgment or sentiment of approbation or disapprobation, as intended by the author of the discourse, to be attached to the ideas of the several *voluntary actions*, (or say *modifications of human conduct*,) which, in the course of it, are brought to view: in other words, his opinion, in relation to each such act, on the question, whether it *ought* to be done, ought to be left undone, or may, without impropriety, be done or left undone.

Simply *Exegetic*, i. e. *Expository* or *Enunciative*, viz. in so far as, without bestowing any such mark of approbation, disapprobation, or indifference, the discourse has for its object the stating what, in the opinion of the author, has, on each such occasion, actually come to pass, or is likely to have come to pass, or to have place at present, or to be about to come to pass in future,—i. e. what act is, on the occasion in question, most likely to have been done, to be doing, or to be about to be done.

This division has for its source the nature of the *mental faculty*, to which the discourse is immediately addressed. In so far as the discourse is of the *Censorial* cast, the faculty to which it addresses itself, and which, in so doing, it seeks to influence, is the *volitional*—the *will*, or at any rate the *pathematic*. In so far as it is of the simply *Expository*, or *Enunciative*, cast, the only faculty to which it immediately applies itself, viz. by seeking to afford *information* to it, is the *intellectual* faculty, the *understanding*.

For a synonym, *Dicastic Ethics* may have the single-worded appellative *Deontology*.‡

The principle of division, deduced from this

their subject the import of this word, the line drawn between these two connected significations should be found not altogether clear and uniform; in this or that work taken singly, not clear; in such or such two works compared together, not the same.

How narrow the conception is, which, by the word *rhetoric* has been presented to the authors of the small institutional books above alluded to, may be seen, by means of a glance bestowed on the string of definitions and examples, of which the books so intituled are composed, and scarcely by any other means. In any one of *these* books may be seen the import of this appellation taken at its *minimum*. The *maximum* may be seen in the definition given of it, in one of the most instructive as well as most recent books on the subject—viz. The Philosophy of Rhetoric, by the late Dr Campbell, of Aberdeen. In the first page of the body of the work, after having, without notice given of the change, or of the relation between the import of the two words, substituted *eloquence* to *rhetoric*—"The word *eloquence*, taken in its greatest latitude, denotes" (he says) "that art or talent by which the discourse is adapted to its end. All the ends of speaking" (continues he) "are reducible to four; every speech being intended to enlighten the understanding, to please the imagination, to move the passions, or to influence the will." Thereupon, not adverting to the practice of *writing*, whether for the writer's own use, or for the use of others—whether particular individuals or the public at large, he immediately uses not only the word *speech*, but the word *speaking*, as co-extensive with and synonymous to the word *discourse*. In a Note, "the word *eloquence*" (says he) "in common conversation is seldom used in such a comprehensive sense." For "the choice" made "of this definition," he thereupon gives two reasons: the second too long to be noticed here; the first is, that "it exactly corresponds with Tully's idea of a perfect orator," which he thereupon quotes. But in this the Christian Divine does the Heathen Philosopher much more, and himself much less than justice: for of his last mentioned *end*, viz. influencing *the will*, in comparison of which those mentioned by Tully are, all of them, but as *means*, the passage from Tully says nothing.

In regard to Grammar, the case is, that, of the field of language,—considered without reference to the particular nature, of the subject, purpose, or occasion on which it is employed, and in *that* sense, in a purely *grammatical* point of view,—the consideration of what belongs to the mutual relations correspondent to the different parts of speech, does not cover the whole expanse. In this part of the field, what is wanted for use, for general use, is a work, the object of which shall be to show the course best adapted to the purpose of rendering language,—i. e. the particular language employed, whatsoever it be,—in the highest practical degree, well adapted to the *general* end or purpose of language, viz. *communication of thought*, abstraction made of the *particular* nature of the particular *purpose*, to which, on the particular *occasion* in question, it may happen to it to be employed. By the observation of the rules, called *rules of grammar*, belonging to the particular language in question, true it is, *that* general purpose will in some measure be accomplished. But to afford a complete direction for the complete accomplishment of it, will, it is believed, be found to require, in addition to those at present designated by the appellation of *grammatical rules*, others, in considerable numbers, extent and variety, which have not as yet been brought to view. To attempt something in this way has been among the designs comprehended in the present work.

* [*Dicastic.*] From a Greek word, which signifies *to determine, in the character of a judge.*

† [*Exegetic.*] From a Greek word which signifies *to set forth in the way of discourse.*

‡ [*Deontology.*] From two Greek words, the first of which signifies *fit, fitting, right, becoming, proper*. Deontology—an account or indication of that which, on the occasion in question, whatsoever it be, is (i. e. by him who speaks or writes, is regarded as being) *fit, fitting, becoming, proper*. It is in *sound* only, and not in *signification*, that it has any connexion with the word *ontology*, employed above.

Applied to every branch of Ethics, taken in the largest sense of the word *Ethics*, the use of such a word as *Deontology* affords a promise of being attended with considerable convenience. It will accord equally well with every system which ever has been, or ever can be, devised, in relation to the foundation of moral obligation: in the use of it, no such incongruity and presumption is involved, as that which is called *petitio principii*—i. e. a begging of the question, an assumption of the matter in dispute.

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source, will be seen to be applicable, and accordingly applying itself, severally to all the following ones.

Division 16.* Division of *Ethics* (whether *Expository* or *Dicastic*) into *Genicoscopic*,† i. e. *general matters-regarding*, and Idioscopic,‡ i. e. particular-matters-regarding.

Synonyms to *Genicoscopic*, as applied to Ethics, are, 1. *Theoretical*; 2. *Speculative*. Synonyms to Idioscopic, as applied to Ethics, is the word *practical*.

In this, as commonly in other cases, the limits between *general* and *particular* not being determinate, so neither are those between what, on the one hand, is *theoretical* or *speculative*, on the other, *practical*. Of the observations expressed, such part as is allotted to the explanation and fixation of the import of *general words*—words of extensive import, the use of each of which is spread over the whole field, or a large portion of the whole field, of the art and science—will belong mostly to the *genicoscopic*, *theoretical*, or *speculative* branch; and, under the name of *principles*, to the above observations will naturally be added any such *rules*, whether of the expository or the censorial cast, as in this respect are most extensive.

The deeper it descends into particulars, the more plainly it will be seen to belong to the *idioscopic*. In so far as, with the incidents exhibited in the fictitious narrative, any rules of a *deontological* nature (as in modern productions is frequently the case) happen to be intermixed, the matter of *novels* and *romances* comes to be included in, and the immense mass of it forms but a part of, the matter of PRACTICAL ETHICS.

Division 17. Division of Ethics—whether Exegetic or Dicastic, and whether Genicoscopic or Idioscopic, into *Apolioscopic*,§ i. e. *political-state-not-regarding*, viz. PRIVATE ETHICS, *Ethics* in the more usual sense of the word,—and *Polioscopic*, i. e. *political-state-regarding*,‖ viz. GOVERNMENT,¶ alias POLITICS.**

Division 18. Division of *Politics* and *Government* into *Esoscopic*,†† i. e. *internal* or *interior-concerns*-regarding, viz. INTERNAL GOVERNMENT,—and *Exoscopic*,‡‡ i. e. *external-concerns-regarding*,—viz. INTER-NATIONAL GOVERNMENT and POLITICS.

By *internal* Politics, may be understood that branch of *Ethics* which has for its subject the conduct of *Government*, i. e. of the *ruling* members of the *political community* or state in question, as towards the *whole* number of the members of that *same* community; by *International Politics*, that branch of *Ethics*, which has for its subject the conduct of Government, as above, as towards the members, whether rulers or subjects, of *other* such communities.

Division 19. Division of *Internal Government* and *Politics*, into *Nomothetic*, [Nomothetioscopic, §§] i. e. *legislative*, viz., LEGISLATION, —and *Aneunomothetic*, [Aneunomothetioscopic, ‖‖] i. e. *without legislation*,—viz. ADMINISTRATION.

In so far as it is by the establishing of laws that the business of government is carried on, it is carried on in the way of *legislation*; ¶¶ in so far as it is carried on otherwise than by the establishing of laws, it is carried on in the way of *Administration*.

Division 20. Division of *Administration*

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* This division will not be found in the Table.—*Ed.*

† [*Genicoscopic.*] From two Greek words, the first signifying *general*.

‡ [*Idioscopic.*] From two Greek words, the first signifying *particular*.

§ [*Apolioscopic.*] From three Greek words: the first of which is the sign of negation; the second signifies a political state, and the third *regarding*.

‖ [*Polioscopic.*] From two Greek words, as above.

¶ [*Government.*] ** [*Politics.*] By the word *Government*, the *practice*, and thence the *art*, seems to be more especially signified: by the word *Politics*, the corresponding branch of *science*.

A commodious division of Private Ethics might be into *esoscopic* and *exoscopic*, i. e. *within-regarding*, (or say *self-regarding*,) and *extra-regarding*, what it is right for a man to do, in so far as his own is the sole interest in question, and what it becomes right for him to do, when the interests of other sensitive beings are taken into the account.

†† [*Esoscopic.*] From two Greek words, the first of which signifies *within* or *inwards*: looking inwards, viz. to the welfare of that individual alone, by whom, on the occasion in question, the subject in question—viz. his own conduct—is looked into.

‡‡ [*Exoscopic.*] From two Greek words: the first of which signifies *outwards*: looking outwards, i. e. to the welfare of some person or persons, other than the one whose conduct is in question, as above.

Two words from the same roots, viz. *esoteric* and *exoteric*, are already in the language; they are, however, but little in use, being terms of technical divinity, applied to the case where the same discourse is supposed to have had, in the intention of him whose discourse it was, two different meanings; one, in which it was designed that it should be understood by one person or set of persons; another, in which it was designed it should be understood by another.

[§§ Government-by-legislation-regarding.]

[‖‖ Government-otherwise-than-by-legislation regarding.]

¶¶ A law is a discourse—conceived mostly in *general*, and always in *determinate*, words—expressive of the *will* of some person or persons, to whom, on the occasion, and in relation to the subject in question, whether by habit or express engagement, the members of the community to which it is addressed are disposed to pay obedience.

This is the only plain and proper sense of the word: in this sense the object of which it is designative is a *real entity*. In every other sense, it is figurative and improper; the object of which it is designative is a mere *fictitious entity*; and every discourse, in which the reality of it is assumed delusory.

Mostly in general words—loose is the expression; but the looseness was unavoidable. Of the mode and degree of *generality*, necessary to distinguish *a law* from *an order of administration*, no

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into *Aneristic*,* [Aneristicoscopic,†] i. e. *Uncontentious*, viz. ADMINISTRATION in the more common import of the term,—and *Eristic*, [Eristicoscopic, ‡] i. e. *Contentious*—viz. JUDICATURE.

Division 21. Division of Judicature into *Autothetic*,§ [Autothetoscopic,‖] i. e. *self-established*, viz. Judicature, according to COMMON *alias* UNWRITTEN LAW,—and *Catanomothetic*, ¶ [Catanomothetoscopic,**] i. e. according to Legislation, viz. Judicature according to STATUTE *alias* WRITTEN LAW.

SECTION IX.

Explanations, relative to the above Sketch and Table.

In the sketch thus attempted, the following particulars present themselves as having, in a greater or less degree, a claim to notice. Subjoined to them, respectively, are a few *questions*, in relation to which some satisfaction may not improbably, it is supposed, be looked for, and will accordingly be here endeavoured to be afforded :—

1. In the Tabular Diagram, and accordingly in the Explanation given of it, the *division* or *ramification* professes all along to be *exhaustive*.—*Question* 1. What are the uses or advantages derivable from a *tabular* sketch, exhibiting in one view a number, more or less considerable, of the branches of art and science? *Answer*. See § 10.—*Question* 2. Why *branches of Art and Science*, and not *Arts and Sciences*? *Answer*. Because, in every part of the field, *Art* and *Science* are found together: no branch of art without a correspondent branch of science—no branch of science without a correspondent branch of art. It is not that in one part of the field you have an art, in another a science, in a third both; but that in whatever part you have either, you have both. See Chrestomathia, Table I. Note (32.) supra, p. 24.—*Question* 3. Why *exhaustive*? What are the uses and advantages resulting from its being so? *Answer*. See § 11.—*Question* 4. Can it, by any and what means, be proved to be so? *Answer*. See § 12.—*Question* 5. The idea of the *utility* of exhaustiveness, as applied to logical division—is it new to the *scientific*, and in particular to the *logical* world? *Answer*. Far from new; but at the same time not as yet quite so clear as it might be, and it is hoped will here be rendered. See § 13.—*Question* 6. Can any directions be given, by the pursuance of which, the exhaustiveness of a systematic sketch, of the subdivisions and contents, of any branch of art and science may be secured? *Answer*. See § 12.

2. The ramification is all along *dichotomous*, alias *bifurcate*, i. e. two-pronged.—*Question* 1. Why *bifurcate* rather than *multifurcate*? *Answer*. To secure its being exhaustive; concerning which, see § 12.—*Question* 2. Is the idea of the necessity of bifurcation to exhaus-

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description is to be found anywhere; and any description on the subject would here be out of place.

Scarcely, perhaps, will the few lines that follow find excuse.

Of the hands, by which political *power*—whether of the *administrative* or the *legislative* cast—is exercised, the situation may be either *supreme* or *subordinate*. In common speech, however,—so indistinct are the conceptions commonly entertained, and the language commonly held, in this part of the field of thought and action,—the terms *legislation* and *legislators* are wont to be regarded and employed, as if applicable in no other case than that in which the situation of the hands, by which the power is exercised, is *supreme*. Accordingly, and in consequence, in the case where it is regarded as being subordinate, the discourses, in and by which their will stands expressed, are, by a confusion of terms, wont to be spoken of, as being the result of the exercise, not of *legislative* but of *administrative* power: as *acts*, not of *legislation* but *administration*.

Between such discourses, as are regarded as being the results or products of the exercise of *legislative* power, and such as are not regarded in that light (the *will* expressed being, in both instances, regarded as the will of a person or persons, possessing in that behalf competent authority) the line of separation remains, even to this day, altogether unsettled and indeterminate. Among the terms, employed in the designation of the various objects, whether *persons or things*, to which the discourse makes reference, the greater the proportion of those, which, in contradistinction to the *individual*, are of the *generic* cast,—being names of *sorts* of persons or things, and not merely of *individual* persons or things, the more likely,—the less that proportion, the less likely,—the discourse is, to be regarded as a result of the exercise of *legislative* power.

* [*Aneristic.*] From two Greek words: one of which is a sign of *negation*; the other signifies *contention* or *of contention*.

The *science* corresponding to the *art* of judicature is termed JURISPRUDENCE. But this is not the only sense in which the word Jurisprudence is employed. In France and in French it has been used to designate what, in English, is called *Common*, or *Unwritten*, *Law*, in contradistinction to *Statute*, or *Written*, Law. Witness *Jurisprudence des Arrêts*.

[† Uncontentious-administration-regarding.]

[‡ Contentious-administration-regarding.]

§ [*Autothetic.*] From two Greek words: the first of which signifies *self*; the second, *established*.

[‖ Self-grounded-judicature-regarding: from *autothetic* and *scopic*. Many are even the already made compounds, which the common Lexicon (Hederic's) presents as capable of being, with more or less propriety and felicity, capable of being, in the character of synonyms to this word *autothetic*, employed to designate the differential character, by which Law in *this* form is distinguished from Law in the *Statute* form: *autothemethlic*, (self-grounded); *autogenethlic*, (self-sprung); *autogonous*, (self-begotten); *autognomonic*, (self-opinioned); *autobulic*, (self-counselled), &c. &c.]

¶ [*Catanomothetic.*] From three Greek words: the first of which signifies *according to*; the second, *law*, or *by law*; the third, *established*.

[** Law-grounded-judicature-regarding.]

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tiveness new, as above? *Answer*. So it is supposed to be. See § 13.

3. Of the first partition of this kind that occurs, the result is composed of *two*, and no more than two, branches of art and science, which are thereby represented as included in that *one*, the division of which has thus been made; and as containing between them the whole contents of it. And so in the case of any other.

4. Of those two condivident branches, the names are respectively formed by, and composed of, the name of the *immediate* trunk,—which, grammatically speaking, is a *noun-substantive*,—followed, in each of the two instances, by a *noun-adjective*. *Question* 1. Of this two-worded name what is the use? *Answer*. To afford a *definition*, and, by means of the definition, an *explanation*, of the name constituting the immediate trunk.

5. Being thus composed of two words put together, each such name may, in *Greek-sprung* language, be termed a *poly-epic*, and in particular a *biepic*, name; in *English-sprung language*, a *many-worded*, and in particular a *two-worded* name.

6. In every instance, for reasons that have already been brought to view, (§ 6.) this two-worded name is, in the first instance, a *Greek-sprung*, and in most instances a newly-framed denomination. *Question*. Why *Greek-sprung*? *Answer*. See above, § 6.

7. In several instances, in the character of *synonyms*, subjoined to this principal biepic and Greek-sprung name, are other such names, one or more in each division; for which see the *Notes*. *Question*. Why these synonyms? *Answer*. 1. That, in each such group of names, the identity of import between the several names may be established; and in so far *that* error prevented, which would have place, if, from diversity in the sign, diversity in the object meant to be brought to view were inferred. 2. That by each of these names the object may in future be made known—not by that name only, but by any one or more of the others:—so that, on each occasion, *that* one of them may be employed, which, with reference to that same occasion, appears most convenient.

8. In most instances, to those *Greek-sprung* two-worded names, are added one or more two-worded, or many-worded, *English-sprung* names. *Question*. Why these names? *Answer*. To make known the import to such readers of English, to whom the import of the Greek-sprung names, new as they mostly are, —especially to English readers,—would not explain itself. By the unavoidable awkwardness of these compound English names, will be afforded the only justification that could be afforded for the practice of employing any such names, as, being borrowed from a foreign language,—and *that* a dead one,—are, until explanations of them have respectively been given and received, not intelligible to any but the comparatively small number, of those by whom the import of the corresponding foreign words happens to be understood.

9. Also, in several instances, new-coined, *mono-epic*, or *single-worded Greek-sprung*, names. *Question* 1. To what purpose are they thus added? *Answer*. To show by what means, in these several instances, the facility, afforded by the use of single-worded appellatives, may be substituted to the entanglement and embarrassment produced by the use of many-worded ones.

10. Also, in several instances, appellatives already in familiar use. *Question* 1. For what purpose are these added? *Answer*. For the purpose of contributing to the fixation of the import of these most familiar terms, viz. by presenting the clearest and most correct conception that can be afforded, of the mutual *relations* of the objects respectively designated by them,—and thus giving the greatest extent that can be given, to whatsoever benefits may be derivable, from the use of a Table constructed in this mode.

11. The first single-worded names that occur, viz. *Eudæmonics* and its associate *Ontology* (both of them Greek-sprung,) are so many names of that trunk which, with reference to the several pairs of branches,—products of successive acts of partition or ramification,—may be styled the *universal* trunk:—*Eudæmonics*, the universal trunk of *Arts*; *Ontology*, of *Sciences*.

12. With reference to the two branches into which it is divided, the name of every branch of art and science, which here presents itself, may, as above, be termed the name of the *immediate* trunk. Every such *immediate* trunk may, with reference to the *universal* trunk, be styled a *particular* or *partial* trunk.*

13. Any number of trunks, intervening between the universal trunk and the partial trunk in question, may, with reference to these two trunks, be styled *intermediate trunks*.

14. The trunk, which stands next to the universal trunk, may be styled the partial trunk of the *first rank* or *order*: that which stands next to it, the partial trunk of the *second* rank or order: and so on.

15. In some instances, several partial trunks are of *the same* rank or order. This is the case, as often as, from different *sources*, the same trunk is successively subjected to so many different divisive operations. In this case, whatsoever be the number of these operations, the divisions performed by them may, in every instance, be equally exhaustive. Be the numbers of *sets* of branches (viz. in so far as the bifurcate mode is conformed to, *pairs* of branches) ever so numerous, the operations themselves, and the pairs of branches, which

* Thus, in Botany, within an *universal* umbel, are, in the instance of many plants, included a number of umbels, termed on that account *partial* umbels.

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are respectively their results, are all, with reference to each other, *co-ordinate:* with reference to the results of a division, performed on any trunk of a higher rank, (the highest rank being expressed by the smallest number) *subordinate:* with reference to the results, of a division performed on a trunk of a lower rank, *superordinate.*

16. The relation which, by the *lesser* aggregate designated by the name attached to any such subordinate trunk, is borne to the *greater* aggregate designated by the name attached to its immediate superordinate, is the same as that which, in the language of the current logic, a *species* bears to its next immediate *genus*—the genus of which it is the immediate species. The trunk, here styled *the universal trunk*, corresponds to the *genus generalissimum* of logicians.

17. Contrarily to the usage, which seems chiefly, if not exclusively, prevalent,—for giving intimation of the relation which, in each instance, is represented as having place between the *trunk* and its two *immediate* branches, the word *is*—instead of being omitted, and left to be supplied by the reader, is inserted.*

Question 1. Why thus depart from the most usual, it being also the most simple, mode?

Answer 1. To exclude *obscurity:* unless the sign of this instrument of connexion is brought to view, no meaning is fully and adequately expressed:—unless the import of it is present to the mind, no meaning is comprehended. True it is, that, to the mind of one, to whom Tables of this kind are to a certain degree familiar, the import of this necessary bond of connexion *may*, at the first glance, and at the same instant, have been presented by those words of the proposition, which are inserted: and thus far no obscurity has place. But, other minds there may be, by which, though through the above-mentioned means, this same conception, will, sooner or later, have been obtained by them, yet for some time it will *not* have been obtained: and, till it is obtained, the undesirable quality of *obscurity* remains in the *object*, and the unpleasant sense of *fruitless labour* in the *mind* to which the object is presented.

Answer 2. To exclude *ambiguity.*—By the sort of omission here in question, it may be, that, in the individual sketch in question, framed as it is here framed, the imperfection thus denominated would not have been found produced. But, in a Table, framed in the manner, in which, to say the least, most Tables constructed for the sort of purpose here in question have been framed, the imperfection would, it is believed, be apt to have place. Two cases may be mentioned, in either of which it has place: 1. In so far as, between any two nouns that have place in the Table, a doubt arises, what is the *copula* intended, viz. whether the *simple* copula—the verb *substantive*—or this or that *complex* copula, that is, any verb, other than the verb substantive.† 2. In so far as, this simple copula being the one fixed upon, so it is that of the nouns, for the connexion of which it is capable of serving, the number is greater than *two*, a doubt arises for the connexion of what two or more it was intended to serve.

In the Table of *D'Alembert*, these doubts—one of them at least, if not both—will frequently, it is believed, be found presenting themselves.

Answer 3. To exclude *misconception.*—As often as of two conceptions, by the simultaneous existence of which ambiguity is presented, one alone is that which was intended by him whose discourse the discourse is, here the ambiguity has two *issues* or modes of termination, either of them capable of taking place. In so far as that which happens to be embraced by the reader, is different from that which was intended by the writer, misconception is the result.

17. For presenting to view so many different classes of the words of which the Table in question is composed, so many different *types* are, it may be observed, employed:—viz. 1. for the designation of the *Greek-sprung* words, which, in conjunction with the name of the *immediate trunk*, constitute respectively the two-worded names of its immediate branches, *Italics*, and these in a comparatively large type, are employed.

18.—2. For the familiar English words, which, when strung together in the form of one composite word, form those appellatives which, to the English reader, are designed to afford an explanation of the, in most instances, new, and, in every instance, *Greek-sprung* epithet,—the common Roman types, and in a comparatively small size, are employed.

19.—3. For the words, which form respectively those single-worded appellatives, which,

* The word *is*—parcel of the aggregate of intimately related words, framing, altogether, what, by grammarians, is called *a verb*, viz. the verb *substantive*—the verb by which *existence* and nothing else is indicated—(*a* verb—as if the different sorts of words of which it is composed, were, all of them put together, no more than one) is by *logicians* styled the *copula:* i. e. the instrument of connexion, of which, in the operation, styled by logicians *predication*, the import is always either expressed or understood. By it, unless where the sign of negation is added to it, existence is, in every instance, attributed to some one object, and, in most instances, *identity*, coincidence, or connexion, to two objects with which it is associated.

† In addition to the import of the *copula*, i. e. of the mere sign of *existence*, by every verb other than the verb substantive, the import of the name of some quality or other, either in the character of a permanent, or in that of a momentary one, may, it is believed, be found presented to the mind:—and this, over and above any of those *accessory* imports, which are denoted by the grammatical terms, *mood*, *tense*, *person*, and *number*.

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being of Greek origin, and for the most part new, have on the present occasion been framed for the present purpose,—the sort of type called *black-letter* is employed.

20.—4. For those words, which, being respectively names of so many branches of art and science, are already in the English language, and in familiar use,—for these appellatives, whether single-worded or two-worded, —capital letters are employed.

21. As the trunks, which they respectively designate, recede further and further from the universal trunk, the types employed for these capitals are smaller and smaller.*

Questions respecting Articles 17 *to* 21.

Question 1. Why, for the different classes of words, employ types of different *species*?—*Answer*. That, at short glances, the differences may be the more rapidly and clearly apprehended.

Question 2. Why, for trunks, at different distances from the universal trunk, employ types of different *sizes*?—*Answer*. That the relations, which have place, in respect of extent of import, between these several terms, may be the more rapidly and clearly apprehended.

Question 3. For the English many-worded appellatives (viz. epithets) inserted for the explanation of the corresponding *Greek-sprung*, and mostly new-coined, appellatives, why employ so small a type?—*Answer*. In order that, forming as it were so many botches, they may, while offering themselves to the eye, rather recede from it than meet it, so as not to be looked at, but in proportion as the demand for the use of them presents itself.

Uncouth as this portion of the language here employed cannot be denied to be, it is not more so than that in which, for the accommodation of English readers, entire works, viz. on the subject of *Botany*, may be seen composed.

Question 4. For those names of arts and sciences which are already in familiar use, why employ large and conspicuous capitals? *Answer*. That with a particular degree of force they may attract the eye: two main uses of the Table being the helping to fix the imports respectively attached to these most frequently employed appellatives, and to exhibit to view, in the clearest manner, the mutual relations between the objects which they are respectively employed to designate.

22. By the familiar sign, composed of the letters *i. e.*—initials of the Latin words, *id est*, —the eye is throughout conducted to the above-mentioned explanatory words, explanatory of the Greek-sprung adjectives; by the kindred sign, *viz.* for *videlicet*, to those appellatives in common use, to which, for the reason above-mentioned, the types called *capitals* have been allotted.

23. Though, by means of some of the above-mentioned appellatives,—viz. *trunk*, *universal trunk*, *partial trunks*, and *intermediate branches*, the matter of the Table is spoken of as if it were arranged in the form of *a tree*, yet the position of the object styled the *universal trunk*, is at the top of the Table; and that of the *branches*, instead of being higher and higher, is lower and lower, as they recede from it. *Question*. Why this apparent contradiction and incongruity? *Answer*. That, here in the tabular diagram, as in the continued explanatory discourse, those parts, which, for the understanding of it, require to be first read, may be the first to meet the eye. Nor, at bottom, is there any absolute contradiction in the case. *Roots*, as well as *trunks*, have their *branches*: and in the instance of a numerous tribe of plants; in a word, in that of *trees* in general, by so simple a cause as a change in the surrounding medium, branches being buried in the earth, while roots are exposed to the air, not only under the hand of the artist, but even under the hand of Nature, roots are found convertible into branches, as well as branches into roots.

Section X.

Uses of a Synoptic Encyclopedical Table or Diagram.

By the name of an *Encyclopedical Sketch*, two perfectly different, however nearly related, objects may, with equal propriety, be designated, and under that common appellative thereby comprehended. The one is, a *continued discourse*, expressed in the forms of ordinary language: the other is a *Systematic Table* or *Diagram*, so constructed as to be in some degree *emblematic*. In the continued discourse, the relations in question are expressed at length in words and words alone: in the emblematic diagram some *image* is employed, by reason of which, while by their respective names, the objects in question are presented to the eye, all of them in the same place, and at the same time, certain *relations*

* It will be found that the author has, in his table, diverged slightly from this description.—*Ed.*

* Pleading for his quondam instructor, the poet *Archias*, "Between art and art," (says *Cicero*,) there exists throughout the whole assemblage of them, *commune vinculum*, a common tie—True; and that tie is the one already above indicated: viz. their common *object*—*well-being*—by which they are constituted so many branches of the universal art, *Eudæmonics*. Between art and art?—Yes; and moreover between *science* and *science*: and of these the common tie is their common *subject*, viz. *substance*:* and by this common tie it is that they are constituted so many branches of the universal *science*, *ontology*—*particular* as well as *general* ontology included, as above, (§ 8.) But, between *art*, taken in its whole extent, and *science*,

* In the import of this word,—in the sense in which, by the *Aristotelians*—at any rate by the *Christian* followers of that philosophy—it has always been employed,—is included (it should be remembered) not *matter* only (i. e. all *bodies*) but *mind*:

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which they bear to one another, are at the same time held up to view. As to the image, that of a *tree*, with its *trunk* and *branches*, is that which, in the earliest example known,* was thus employed; nor does it appear that the nature of the case affords any object better adapted to this purpose.

To the form of *a continued discourse* the advantage attached is, that the quantity of explanation given by it is not restricted: but with this advantage is connected a disadvantage, viz. that, if it be of a certain length, it is only in succession that the several parts of it are presented to, and can be taken cognizance of by, the eye; so that, unless it be under the constantly repeated trouble and embarrassment, of turning backwards and forwards, leaf after leaf, or that of a constant strain upon the memory, or both, no comparison of part to part can be made.

In *the systematic diagram*, the advantage is, that, for the purpose of uninterrupted and universal comparison, continued to any length, after the objects with their several relations have been respectively explained, each of them, at whatever length may have been deemed requisite, in and by the continued discourse, the whole assemblage of them is, or at least, as above-mentioned, may be so brought together, as to be kept under the eye at once, forming as it were so many parts of one and the same picture.

Thus it is, that to this form two perfectly distinguishable, howsoever closely connected, advantages, both of them of a practical nature, are attached: in the first place, of the whole matter taken together, *conception* is facilitated and expedited; in the next place, *comparison*—reciprocal comparison—the articles being capable of being run over for all purposes, in all directions, and in all imaginable orders of succession, without interruption, and with that *rapidity* which is proverbial as being among the characters of *thought*.

To set against these advantages, no disadvantage has place, except that to the quantity of matter, to which *this* form is capable of being given, there are limits which apply not to the other. But, within these limits, here, as in a *map* or an assortment of maps, it is seldom that, be the purpose what it may, within the quantity of space capable of being thus employed, a quantity of matter sufficient for the purpose will not be capable of being displayed.

Anterior to the time of Bacon, were the profit worth the trouble, Encyclopedical Sketches might, even in the *tabular* form, it is believed, be found, and in both forms in no inconsiderable abundance. But, by the true lights, shed upon the field of *thought and action*, and thence upon the field of *art and science*, by that resplendent genius, all those false lights have been extinguished.

Of the two above-distinguished forms, of which an Encyclopedical Sketch is susceptible, the only one, however, of which the works of Bacon afford an exemplification, is that of a continued discourse, the *purely verbal* form.

In like manner, in no other than the purely verbal form, and that, too, wrought in a looser texture, may be seen the Encyclopedical Sketch prefixed by *Ephraim Chambers* to his Dictionary of Arts and Sciences.

With the two Encylopedical Sketches of *Bacon* and *Chambers* before him, *D'Alembert* prefixed to the French *Encyclopedia* his Encyclopedical Sketch, in the *purely verbal* form, taken, as he says, chiefly from Bacon: and, moreover—and for the first time reckoning from the days of Bacon—that correspondent sketch, in the form of a *systematic diagram*, which is here copied,† and which has been the subject of the remarks given above.

This diagram is exhibited by him in the character of the principal object; and it is in the character of an *Explanation* of that principal object, that the continued and purely verbal discourse attached to it, is delivered by him.

Notwithstanding the imperfections above held up to view, to which others might have been added, signal was the service which, in the estimation of the author's collaborators, among whom were numbered almost all the men of any literary eminence whom France at that time afforded, was rendered by the instrument

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taken in its whole extent, there runs throughout that all-pervading and most intimate connexion, which has above been brought to view: (See Tab. I. Note 32.) For the arts he was speaking of, the Orator might thus, in virtue of this connexion, supposing him aware of it, and supposing it to have been suitable to his purpose and to the occasion, have found two, viz. the two above-mentioned, common ties.

Not that, in any part of the field, any such conception, as it is in the power of any of the words in question to convey, of those *general* ideas, of which they are respectively the names, can serve in the place of ideas derived from the perception of individuals, of the correspondent individual objects respectively contained in them. No; it is only through *individual* objects, that any clear and adequate ideas are presented and lodged in the mind: and it is the opposite notion, that constituted the all-pervading error of the class of philosophers called the *Schoolmen* or *School-Logicians*, and gave, to little less than the whole mass of knowledge or supposed knowledge of those times, the character of a nut-shell without a kernel, or a skull without brains.

But what it *is* in the power of these words to do is—to afford so many ready *receptacles*, as it were, or *boxes*, in which the *individual ideas*,—in proportion as they are drawn forth from the *individual objects* which are their *sources*,—may be lodged and deposited, in such manner as to take hold of the memory, and there to remain, in readiness to be, at any time, called up for use.

* The *Tree* of *Porphyrius*, as exhibited in the Table hereto annexed. For explanation, see the next Section.

† See the Table.

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so constructed as hath been seen. In it they beheld, nor with other eyes has it been beholden (it is believed) in that or other countries, by their contemporaries or their successors, a sort of *novum organum* in miniature: a sort of instrument, which every man, to whose lot it has fallen, to labour, upon a scale of any considerable extent, in any part of the field of art and science, ought to have constantly in his hands and before his eyes.

To what instruction soever may have been extractible from that diagram, whether any and what addition has been afforded, by the remarks herein above made on it, together with the subjoined sample of another, executed upon a plan considerably different, the reader will judge.

A Table of this sort may be considered as an instrument in the hand of *Analogy*.

Scarce will the *art* be found, from which, through the medium of *Analogy*, assistance may not, in some shape or other, be borrowed by *some* other art, not to say by *every* other.

By *Analogy*, scarce will the article of *knowledge* be found, by which, in some shape or other, *light* may not be received from some other, not to say every other.*

Conception, retention, combination, generalization, analysis, distribution, comparison, methodization, invention—for all or any of these purposes, with an Encyclopedical tree in his hand, suited to the particular object which he has in view, skipping backwards and forwards, with the rapidity of thought, from twig to twig, hunting out and pursuing whatsoever analogies it appears to afford, the eye of the artist or of the man of science may, at pleasure, make its profit, of the labour expended on this field.

Yes, true it is that, no otherwise than through individual objects, can any clear ideas be imbibed, from the names of those ideal aggregates or bundles, of different sorts and sizes, into which, by the associating and dividing power of those appellations, they are collected and distributed. But, from a comparatively small number of individual objects, may be obtained very instructive and practically serviceable ideas, of very extensive aggregates. Many years ago, forty thousand, or thereabouts, was supposed to be the number of *species* of plants at that time more or less known: forty thousand, the number of those ideal aggregates, designated by the name of *species:* millions of millions the number of the individuals at each moment designated by those same specific names. Yet from any one of those individuals may be abstracted a tolerably adequate idea of the species in which it is considered as contained; and how small is the number of species necessary to plant in the mind the prodigiously extensive idea designated by the word *plant!*

By attention, applying itself all along with still closer and closer grasp, by this faculty it is that advances, fresh and fresh advances, all of them so many conquests, are continually made in the field of art and science. Each laborious and inventive adventurer proceeds on in the wilderness, as far as his inclination and the force of his mind will carry him. Sooner or later, the same man or another, more frequently another, makes a road, whereby, to succeeding travellers, the quantity of labour necessary to the reaching of that farthest point is more or less reduced. By successive labourers of this pioneering class, the road is made gradually smoother and smoother. Where one ends, another begins; and hence it is that the veriest pigmy is at present able to look down, from a point, which, by his utmost exertions, the giant of anterior times could never reach.

That, of the branches of Art and Science, which, by the denominations here employed are thus endeavoured to be brought to view, the distinctness is, in a multitude of instances, far from corresponding to the distinctness of the denominations themselves, is but too true, and presents to view an imperfection no less undeniable than it is believed to be irremediable. In this tract, approximation is, throughout, the utmost that can be hoped for. But, unless and until some other scheme of distribution shall have been found, such as shall be exempt from, or at least in a less degree exposed to, this imputation of indistinctness, than that which is here submitted, the imperfection, so long as the work has any use, will not afford any sufficient reason for leaving it unattempted. That no scheme will be found altogether exempt from the imperfection, may be asserted with full assurance; and, if any scheme less tinctured with it than the present one is, could on this occasion, and by these eyes have been found, *that* and not *this* would have been the scheme in *this* place brought to view.

Let it not at any rate be said, that, by reason of this indistinctness, it is no more than upon a par with those other Encyclopedical Sketches, in the hope of superseding which it has been framed. Between the degree, and even the species of indistinctness, which has place in the two cases, wide indeed (it is believed) will be seen to be the difference. In *this* sketch (to borrow a phrase from Scottish history) in this sketch, may here and there be found (it is true) a small proportion of *debateable land*, concerning which it may be dubious to which of two contiguous districts it may with most propriety be said to belong: but in *those* cases, many are the instances, in which the whole of the territory, which is represented as belonging exclusively to one of two districts, may, with equal propriety, be said to belong to either or to both.

* See Note *, page 98

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Section XI.

The Mode of Division should, as far as may be, be exhaustive—why?

If, of a sketch of the kind in question, the utility is by any person recognised, to satisfy him of the utility of its being rendered *exhaustive*, not many words can, it is supposed, be necessary. To be *exhaustive*, the parts which, at each partition or division so made, are the results of the operation, must, if put together again, be equal to the whole; and thus, and in this sense, *exhaust* (to use the word employed by logicians) the contents of the whole. It is only in so far as the divisions which it contains are, in this sense, respectively *exhaustive*, that the information, contained in a work which is composed of them, can be *complete*—can be what it appears to *undertake* for being, can be what it *might* be, and what, if it might, it *ought* to be. This being the case, if it be *not* exhaustive, every proposition, in which the exhaustiveness and completeness of the division is assumed, will, in so far as the assumption is proceeded upon, be, *pro tanto*, erroneous and incorrect; and, if received and acted upon, delusive: and, in whatsoever stage of the division the incompleteness has place, the consequence is, that, in every sub-division, the original imperfection is repeated, and the correspondent part of the work tainted with it.

But it is only by means of a system of division, carried on in the thus *declaredly* exhaustive mode, that any assurance can be afforded or obtained, that the survey taken of the field of *thought and action*, and therein of the field of *science and art*, or of whatsoever portion of that field is proposed to be comprehended, in the survey, is complete; any assurance, that, in the course of the progress made through it, a number of parts, in unlimited abundance each to an unlimited extent, may not have been omitted.

It is only in this way, that, even supposing the whole to have been actually embraced and comprehended in the survey, it can, in the mind that has embraced it, wear the aspect and character of *a whole*: instead of that of a regular *tree*, the form in which it presents itself will be no other than that of a confused heap of unconnected fragments,—each of them, in respect of *form* and *quantity*, boundless and indeterminate.

In the body of this work, intimation was given of what presented itself as the chief use, derivable from an insight, more or less extensive into those foreign languages, ancient and modern, in which the vernacular language has its roots. It consists (it was said) in *this*, viz. that, to an eye thus instructed, in the whole field of the language, there being no *hard words*, there shall be no absolutely *dark spots*; nothing that shall have the effect of casting a damp upon the mind, by presenting to it the idea of its ignorance, and thence of its weakness.

Correspondent to the sort of consciousness of power so obtainable in the field of language, is that which, by means of a set of *systematic sketches*,—and, in particular, by means of a set of *systematic* and *tabular diagrams*,—always supposing the mode pursued to be exhaustive, may be obtained and exercised over the field of *art and science*. No parts in it, ~~from which~~ through the medium of these appropriate denominations (the relations of which, as well those to one another, as to the matter of the body or branch of art and science, are determined and brought to view) ideas, more or less clear, *correct*, and *complete*, are not radiated to the surveying eye: in a word, no absolutely *dark spots*: no words that do not contribute their share towards the production of so desirable an effect, as that of substituting the exhilarating perception of mental strength, to the humiliating consciousness of ignorance and weakness.*

Desirable as this property will, it is hoped, be acknowledged to be, with reference to the purpose at present in question,—a purpose will now be mentioned, to which it must be acknowledged not to be applicable. Relations of *logical identity and diversity*, and relations of *practical dependence*, as between branch and branch, both these sets of *relations* have already been mentioned, as capable of being, with good effect, brought to view in the form of a *synoptic Table*. But, for the exhibition of relations thus different, neither can any one Table, nor any number of Tables, upon this same plan, be made to serve. In the plan, of division and correspondent distribution, pursued in the view given of the *logical* relations as above explained, *exhaustiveness* will indeed always be an essential feature. But where the relations to be exhibited are the *practical* sort of relations just spoken of, viz. those of *dependence*, or say, of *subservience*, (whether the subservience be mutual or but unilateral,) the nature of the subject admits not of any such regularity and all-comprehensiveness. From branches of art and science, the most remote from one another in the logical tree, one and the same *art* may be seen looking for

* Words which, whether derived or not from foreign languages, appertain exclusively to particular trades and occupations, will of course continue to operate as so many incidental sources of the sensation of *ignorance*: to a person not correspondently conversant with the language of those particular trades and occupations respectively, there must, in those several divisions of the language, be of course as many *dark spots* as there are of these peculiar words. But, in these instances, it will, by the context of the discourse, be sufficiently shown, that, by a want of acquaintance with the import of these particular words, nothing worse is indicated, than a correspondent want of acquaintance with the field of that *particular* trade or occupation; not any want of acquaintance with any part of the general body of the language. The language of *seamanship* will afford an example.

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assistance. *Natural History, Anatomy, Chemistry, Architecture, Political History, Ethics*—all these, not to mention any more, the *Painter*, not to speak of the *Poet*, may have occasion to summon to his aid.*

Exercising dominion over almost every branch of art and science, sometimes in furtherance of the interests of the professors of that particular branch, more frequently and more necessarily in furtherance of the interests of the whole community, the legislator, on pain of acting blindfold, has need of an insight,—the more clear, correct, and extensive the better,—into the matter of every such branch of art and science. For his use, therefore, to the Table of *logical relations*, exhibited upon an exhaustive plan, a Table of relations of *dependence* or *subservience*, as above explained, constructed upon a plan in which *particularity* and *copiousness* should be the ruling objects, would be an essential accompaniment.

Section XII.

Test of All-comprehensiveness in a Division how constructed—Additional Advantages, Distinctness and Instinctiveness. Bifurcation why necessary.

A problem is here proposed, and undertaken to be solved. A logical aggregate of any kind, as designated by any appropriate name, being given, required to divide it into a number of parts, each in like manner designated by a distinctive name, in such sort, that, in the sum of these parts, shall be contained the same individuals, and all the individuals which, and no other individuals than those which are contained in the whole.

Such is the problem, the solution of which is requisite for the present purpose. In other words, the solution of it consists in securing to the *parts*, into which the sort of *whole* in question is to be divided, the *property* of *all-comprehensiveness*.

For the accomplishing of this solution, what has been found necessary, is, the construction of an *instrument*, such as, being employed in the divisional operation in question, and thereby in the conformation of the parts, which are the results of it, shall serve as a *test*, in such sort, as to demonstrate, if such be really the case, that the division thus effected is in fact an all-comprehensive one: call it accordingly, *the test of all-comprehensiveness*.

An instrument of this sort has accordingly been constructed †, and, on turning to the Encyclopædical Table, will be seen to have, in every part of it, been explicitly or implicitly employed. It consists in what may be called the *contradictory formula*: the essence of which consists in the sign of *negation*, employed or employable in the designation of some one in each pair of branches, and *not* in that of the other. But of this presently.

In and by the word *pair*, as applied to the branches thus produced, what is already implied is, that, by the instrument in question, it is only in the way of *bisection* that the problem can be solved. But in this mode, it will be seen, that every desirable purpose may be accomplished: that it cannot by any other mode; and that on any occasion at pleasure, by division into two parts, division into any other number of parts may, if there be any use in it, be accomplished.

Of the desirable property, which, on this occasion, stands as the principal object, and occupies the fore-ground,—*all-comprehensiveness*, having for its synonym, as already explained, the word *exhaustiveness*,—is the name. But, by the same means by which to the scheme of division in question this property is secured, two other desirable properties, as it will be seen, are, at this same time, secured, viz. *distinctness* and *instructiveness*.

Intimately as they are connected with the principal property, and, by the same docimastic instrument, secured to the scheme of division executed by means of it, what will at the same time be seen is, that these two subsidiary properties are not, either of them, inseparable from it. Instances require to be shown, and will accordingly be shown, in which a scheme of division is or may be *all-comprehensive* without being *distinct*, and all-comprehensive and *distinct* without being *instructive*.‡

For securing *clearness* to the ideas attached

* In the French Encyclopædical Table, so often mentioned, between the art and science of the *Painter* and that of the *Chemist*, according to the view there given of the two objects, there could not be any relation at all, except in so far as *painting* is a branch of *Connoissances Humaines—human knowledges* or *knowledge*. According to that Table, in *painting* (and not only in *painting* but in *engraving*) the only one of the human faculties employed, is the *imagination*: and as, according to the same Table, the *art* of making colours, fit to be used in painting, belongs to *memory*,—and, if it be included in *Chemistry*, the knowledge how to make them, belongs to *Reason*,—the *Painter* might be at some difficulty about his colours, if, for finding out the way to have good ones, he had no other means than what are afforded him by that French Table.

† By the mathematical reader, with reference to the solution of the principal problem, the construction of this test may, if he pleases, be considered in the character of a *lemma*.

‡ On the occasion of every such division, what, to prevent confusion, is altogether necessary, is—that, of the names, given to the parts which are the results of the division by no one shall any individuals be designated, *other* than those which are comprehended in the aggregate so undertaken to be divided. By the word *preciseness* or *precision* may be designated the ulterior property thus represented as desirable. But, to its presenting this signification, it will be necessary, that the original and material import of the word (*precision* from *precido, to cut off*, viz. everything that out-stretches the proper line) be at the same time present to the mind.

Of this property, however, to avoid embarrassing the present inquiry with matter which, on the pre-

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to the names of those three properties, a few words of explanation may have their use.

1. Of *all-comprehensiveness*, with its synonym *exhaustiveness*, enough has in this view been said already.

2. By *distinctness*, as applied to the division in question, (whether by the word *division* what is here meant be the *operation* or the *result*,) by distinctness what is meant is, that, of all the individuals contained in the subject of the division, viz., the *trunk* or say, the *major aggregate*, it shall, when the division has been performed, be, in the instance of every such individual, clear and manifest to which of the several branches it belongs.

3. By *instructiveness* is meant a property which bears relation, and applies to both the others. It consists in this; viz. that the words, employed for giving denomination to the branches, shall be such, as to declare and announce, that the division is *all-comprehensive*, as also that it is *distinct*.

Of this property, it will be seen, that neither is it *useless*, nor is the warning, thus given to secure to the scheme of division the benefit of it, *superfluous*. 1. The property is not *useless*. For from the property of *all-comprehensiveness* no use can be derived, but in so far as the scheme of division is understood to be possessed of it: and so in the case of *distinctness*. 2. Neither is the warning superfluous. For, various, it will be seen, are the instances, in which these properties, though really possessed by the branches, into which, by the current names employed in the designation of them, the trunk has been divided, yet (such is the structure of those names) are not held up by them to view, and are therefore of little or no use.

Thus much as to the desirable properties, which, by the test above alluded to, viz. the *contradictory formula* have been secured, it is supposed, to the scheme of division here employed:—now as to the *contradictory formula* itself. Examples of it have been in existence as long as the logical tree of *Ramus*, improperly (as will be seen) attributed to *Porphyrius*, has been in existence.* Examples of it are, as above, the matter of which the Encyclopædical tree here attempted is composed. What remains to be done here is, to point out the precise part to which the appellation is meant to be applied, and the ground on which it has been thus applied.

In the instance of each trunk, observation has been made, of a particular *property*, as being possessed by every individual, to which the name of the *generic* (say the *major* or *comprehending* aggregate, employed to represent the *trunk*) is applied: possessed, moreover, in like manner, by every individual, is a property to which the name of the *minor* or *comprehended* aggregate (the relatively specific appellative, employed to designate one of the two *branches*) is applied,—but as to the other of the two branches, *not* possessed by any one of the individuals, to which the appellative employed to designate that branch is applied.

Having thus the effect of giving, as it were, *birth* to, and, at any rate, *indication* of, the *distinctness* supposed to be possessed by the two branches, this property may be termed the *distinctive property*.

This subject (be it what it may) IS *possessed of this quality* (be it what it may;) *this subject* (meaning the same subject)† *is* NOT *possessed of the quality* (meaning the same quality) —these two are—as the logicians call them, and as any body may see they are,—a pair of *contradictory* (viz. *mutually* contradictory) *propositions*: the former of these may be termed the *positive* contradictory, the other the *negative*.

In regard to *contradictories* (such for shortness is the term employed, instead of saying *a pair of mutually contradictory propositions*) two observations have been made by logicians, and delivered in the character of axioms. One is, that, to whatsoever *property*, and with reference to whatsoever *subject*, these opposite assertions are applied, in no instance will they, both of them, be found true. The other is, that, to whatsoever quality, and with reference to whatsoever subject, they are applied, one or other of them will be found true.‡

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sent occasion, has not presented itself as essential to it, no further mention, except what follows in this note, will be made.

In the scheme of division, pursued in the example here given of an encyclopædical tree, this property will, it is believed, be found actually possessed, and that by every branch without exception. But among the *trivial* or *current* names, which, in the character of synonyms to the names of the branches of the tree in its encyclopædical form, have for illustration been introduced, some may perhaps be found, whose claim to the possession of this property may not present itself as exempt from dispute. This deficiency, in respect of *preciseness*, is among the unavoidable results, of the indeterminateness, which will, in so many instances, be seen to be attached to the names in common use.

Properties may receive explanation from their opposites. *All-comprehensiveness* may be said to have for its opposite, *scantiness*; *preciseness*, *extravasation*.

* For this diagram see Table IV.

† Viz. if it be an individual, the same individual—the same in all its parts; if an aggregate, an aggregate composed of exactly the same individuals, neither more nor less.

The portion of *time* in question must also be, in both instances, exactly the same; for it may be that, at one time, the individual *is* possessed of the property in question; at another time *not* possessed of it.

‡ If, so far as it goes, the account *here* given of *contradictories* is correct and clear, that which may be seen given by the Aristotelian logicians will hardly be found in complete possession of either of these desirable qualities. Only between *assertions*, surely, can *contradictoriness* have place: yet, by Saunderson, it is spoken of as having place be-

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An example may here perhaps be required. Turning to the Encyclopædical tree (letter-press or diagram) take then for the *dividendum*, viz. the *trunk* or *major aggregate*, the branch of art and science therein denominated *Posology*, but commonly called *Mathematics*. It having been proposed, in an *all-comprehensive* and distinct manner to divide this *major aggregate* into two *minor aggregates*, exhibited in the character of *branches*, a *property* was looked out for, which, being possessed by every individual object comprehended in the *major* aggregate, as also by every individual in one of the two aggregates into which the major aggregate was to be divided,—and at the same time *not* possessed by any individual *not* comprehended in that same minor aggregate,—might, for the purpose of distinguishing each of the two minor aggregates from the other, serve in the character of a *distinctive property*. In the property of bearing relation to *form*, or say *figure*—i. e. in the property of taking for its subject *form* or *figure*—a property which seemed capable of being employed in the character of a *distinctive property* was found. Of the two *minor* aggregates, into which, by this means, the *major* aggregate, *Posology* or *Mathematics*, was divided; *form-regarding*, or *figure-regarding* Posology or Mathematics, in *Greek-sprung* language, *Morphoscopic Posology*, was the name given to the *positive* minor aggregate: this done, the name of the *negative* minor aggregate was thereby determined and given, viz. *form-not-regarding*, in *Greek-sprung* language, *Amorphoscopic* Posology, or, to exclude ambiguity *Alegomorphoscopic*.

But, in that portion of the matter of discourse, which in the Table, is employed for giving expression to these two *minor* aggregates, in the character of branches of the *major* aggregate, of the division of which they are the *immediate* results, is contained the import of the above-mentioned *formula*, brought to view under the name of the *contradictory formula*. The division, of which they are the results, is therefore, at the same time *all-comprehensive* (or say, *exhaustive*) and *distinct*. It is moreover *instructive*: for, in and by the terms of it, the *all-comprehensiveness* and *distinctness*, which really belong to it, are declared. Speaking of propositions, delivered on the subject of *Mathematics*.—*This proposition does regard figure*.—*This proposition does not regard figure*; of no one *proposition*,* delivered on the subject of Mathematics, will these two contradictories be found, both of them, to hold good: and if, of all the *propositions*, which *do* thus regard *figure*, one branch of Mathematics be (and there is nothing to hinder it from being) composed, and if of all those which do not thus regard figure, another, and the whole of that other branch, be composed; here we have two branches, in one or other of which every conceivable proposition belonging to mathematics will be found to be contained.

For each one of these *minor* aggregates or branches, when in the character of a *major* aggregate, in pursuance of the divisional process, it came itself to be divided, in lieu of, or at least in addition to, the *many-worded* appellative, which, in its character of a *branch*, is, in the first instance, employed to designate it, there should be a *single-worded* appellative. In the words *Geometry* and *Arithmetic*, two words in current use presented themselves as being,—and that without any violence done to their established imports,—capable of being employed in this character; i. e., as comprehending between them the whole of the import, which either *is*, or with propriety *can be*,

tween two *terms*. Of the two above-mentioned *axioms*, which have *contradictories* for their subject, it has been seen how well they correspond.—Yet, by Saunderson, one of them, viz. the one last mentioned, is represented as applying to *terms* alone,[a] nothing being therein said of *propositions*: the other, as applying to entire propositions alone,[b] nothing being there said of *terms*: and of these axioms, that which is applied to terms alone, instead of constituting a rule of itself, is, in the form of a *parenthesis*, sunk as it were under the head of another rule, which seems far from equalling it in clearness.—Though really derived from the Aristotelian logic, the account here given of *contradictories* not being exactly conformable to the account given in that system,—what difference there is between the two accounts might, but for this warning, be liable to be, without further scrutiny, supposed to be the result of misconception.

To obviate any such supposition, it seemed necessary thus to give a brief intimation, of the considerations, by which the departure here made from the authoritative standard seemed necessitated. Could room have been spared, other supposed imperfections in the Aristotelian account of the matter might here have been pointed out.

[a] Logicæ Artis Compendium, p. 40. [b] Ib. p. 72.

* [*Proposition*.] Note, that the sense in which the word *proposition* is here employed, is not that in which it is commonly employed by *Mathematicians*, but that in which it is employed by *Logicians*. If the former were the sense put upon it, the *distinctness*, here ascribed to the two branches, might not be very readily recognised, if, indeed, it would really be to be found. So apt are mathematical men to go backwards and forwards, between the *geometrical* and the *algebraical* mode of expression, according to the supposed convenience of the occasion and the moment, in a manner as it were mechanical, and almost without notice taken of the difference,—what may very well happen is, that of what may, in the mathematical sense, be one and the same *proposition*, in one part *figure* may *be*, and in another part *not* be, an object of regard. But, because two things are capable of being mixed together, it follows not that in their own natures they are not distinct: and, taking the word *proposition*, in the *logical* sense, scarcely will it be said, that, in one and the same *proposition*, the matter is spoken of at the same time in a Geometrical and in an Arithmetical point of view,—spoken *of with* reference to figure, and *not* with reference to figure at the same time.

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comprehended in the import of the word *mathematics:* with propriety, *i. e.* without outstretching* the most extensive import, for the designation of which that appellative has ever been employed.

On this occasion, the pair of names, which, for these two branches of mathematics, have, on this occasion, been, in the *first* place, *brought to view*, are the two newly-devised *many-worded* ones. But the pair of names, by which *those* names, and the relation of which they are expressive, were, in the first instance, *suggested*, are the two old-established *single-worded* ones. *Geometry* and *Arithmetic*, considered as branches of art and science, in what particular, it was asked, do they *agree?* The answer was obvious enough:—as being, both of them, branches of *Mathematics*. So far so good. But, forasmuch as they are not the same branch, in what is it that they differ? Of a survey taken of the contents of each, with a view to this question, the result was *that*, to which, as above, the pair of *many-worded appellatives* have given expression. In one of them *figure* is regarded; in the other, *not*.

Now then, thanks to the Encyclopædical names,—of the two trivial names, viz. *Geometry* and *Arithmetic*, which are in use to be employed in the designation of these two branches of mathematical art and science, the *all-comprehensiveness*† will, it is believed, be readily enough, and generally enough recognised: nor will the *distinctness*,‡ it is believed, be found to be in any greater degree exposed to dispute.

At the same time, in regard to *instructiveness*, as above explained, the utter absence of this quality will, in the instance of both these trivial names, be found, it is believed, equally manifest: and thence it was, that, as soon as it did present itself, it was in the character of a sort of *discovery*, that the coincidence of these two imports, with the imports of the two many-worded appellatives to which they are here stated as being respectively synonymous, presented itself:—and, in this same character, howsoever it may be in the case of *an adept*, in the case of many a learner, there seems little doubt of its presenting itself.

Of the nature of the *contradictory formula*, the explanation above given will, it is hoped, be found tolerably intelligible. Its capacity of serving, in the character of a *test* of *all-comprehensiveness* and *distinctness*, in a logical division, will also, it is hoped, be recognised. In the formation of the Encyclopædical appellatives employed in the Table, this test will, in several instances, be seen actually and explicitly employed, included as it is in the composition of the words themselves. Other instances, however, there are, in which it is not thus employed. In the production of this omission, two considerations, whether sufficient or not, concurred: one was—that, by the employment of the two epithets, *both* in the positive form and independent of each other, instead of no more than one positive one,

* [*Out-stretching*] See above, Note ‡ to p. 102.

† [*All-comprehensiveness.*] True it is, that, to the purpose of its being regarded as *all-comprehensive* (this division of *Mathematics* into *Geometry* and *Arithmetic*) it is necessary that, under *Arithmetic*, *Algebra* should be considered as comprehended: but about this there cannot be any difficulty; since, by Newton (as appears by his work, entituled *Arithmetica Universalis*,)—by Newton and so many others—it is spoken of as thus included.

True also it is—that, to this same purpose, it is equally necessary that, under *Algebra*, *Fluxions*, which, on this supposition, might, in the many-worded form, be denominated *Fluxional Algebra*, should be considered as included. But upon consideration, neither in this case, it is believed, will there be found any serious difficulty. Applicable, with equal propriety, to *Fluxions*, as well as to whatever part of Algebra cannot be brought under the denomination of *Fluxions*, will be found the appellative *Agnosto-symbolic:* Agnosto-symbolic, i. e. *expressed by signs unknown;* by *signs*, of which, in the first instance, antecedently to the solution of the problem the value and import is not known:—known in the same degree of clearness as those of which the written language, peculiar to *common Arithmetic*, is composed.

This division of *Algebra*, into *common* and *fluxional*, would any one wish to see it expressed in the language of the *Encyclopædical tree?* In the solution of this logical problem there would not, it is believed, be found much difficulty; and by this means an exemplification may be afforded of the method in which, in any given part of it, the process by which these first lines of the Encyclopædical tree have been constructed, may at pleasure be carried on to any further length.

For distinguishing *Fluxional* from *Common* Algebra, take, for the distinctive property of *Fluxions*, the fiction by which in this case, for the production of the quantities in question,—for the *genesis* or *generation* of them (to use the language of Mathematicians)—*motion* is supposed. If this assumption be admitted as correct, *Algebra* being taken for the immediate *trunk*, here then we have,—for the *positive* branch *Cinesiopseustic, (motion-feigning;)* for the *negative* branch, *Acinesiopseustic (motion not feigning.)* By him, by whom, being considered in the *Newtonian* point of view, the subject of the branch in question is accordingly treated of in the *Newtonian* language, the propriety of the denomination thus proposed for the positive branch, will not, it is believed, be considered as being exposed to dispute. Whether for the same branch, or at any rate the correspondent branch, if considered in the *Leibnitzian* point of view, and in the Leibnitzian language, (*that* being the language mostly employed on the Continent,) styled the *Calculus differentialis et integralis*, (in French, *Calcul differentiel et integral*,) the same Encyclopædical *division*, with or without the same *nomenclature*, would, and with equal propriety might, be made to serve, is an inquiry which stands too wide of the present disquisition to be endeavoured to be comprised in it.

‡ [*Distinctness.*] See above, p. 104, Note, on the word [*proposition.*]

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with the correspondent negative, a greater quantity of instruction might, in a given compass, be conveyed: the other was—that, in some instances, doubts seemed to hang over the question, which of the two contradictory properties should be presented in the *positive* form; which in the negative: and, on whichever side the determination might happen to fall, for explaining the grounds of such determination, more words might become necessary than could well be spared. Of the plan of nomenclature here pursued, the characteristic property accordingly is—*not* that, in the composition of either name of the pair, the criterion in question—the sign of the contradictory formula—has in every instance been *actually* employed; but that, in the character of a *test* of the all-comprehensiveness and distinctness of the division, in the expression of which these names have been employed, a pair of names, in one of which this sign is employed, may, without misrepresentation, in every instance in which it has not been thus employed, be added or substituted.*

Of the lights, which the nature of the work admits of and requires, the Encyclopædical names thus provided, though they are the only *instruments*, are not, it should be observed, the only *objects*. Other objects, for the illustration of which the demand, as being much more general, is accordingly still more urgent, are those *current* names, examples of which have just been brought to view; and which, wheresoever they could be found, have been sought out, and put by the side of those Encyclopædical names, with the imports of which their respective imports seemed to approach nearest to a coincidence.

Unfortunately, that this coincidence should be perfect, is in many instances plainly impossible: such it will be seen to be in every instance, in which the import attached to the current name is in any degree *indeterminate;* and the further this import is from being determinate, the further will the agreement be from amounting to a perfect coincidence. Unfortunately, again, these instances are at present but too numerous: of one of these mention has already been made; and, without need of looking elsewhere, among such of these names as are comprehended in this Table, other instances will, it is believed, be found observable.

To the satisfaction of the reader, that, in so far as it has place, observation of the impossibility in question should be taken, is highly necessary: otherwise, where everything has been done that can be done, it may appear to him that nothing has been done. To give determinateness to the import of an appellative of his own framing depends upon the author; not so as to that of any of those which he finds already made. Towards effecting that coincidence, which, as above-mentioned, is so highly desirable, all that depends upon *him*, is, in the first place, to give to the appellatives of his own framing that degree of determinateness which the nature of the case admits of; and, in the next place, among those which he finds ready made, to choose for synonyms to those of his own making, such trivial names, the import of which appears, upon the whole, to come nearest to that of his own, being at the same time, if in any, in the smallest degree indeterminate.

For securing determinateness to those of his own framing, the established logical expedient of the *distinctive property* afforded to the author of this Table an effectual means: for choosing out of the existing stock of trivial names such as should stand least exposed to the imputation of indeterminateness, no equal security could be afforded by the nature of the case.

In this way, though by no direct and immediate means can determinateness be given to the import of those current names, of which at present the import is indeterminate, yet in time, and by means of the instrument of fixation here brought to view, an object so desirable may gradually perhaps be accomplished. By the supposition, a standard of comparison and reference will have been set up; supposing it to be what it is intended to be, and, in the nature of the case, well capable of being made, supposing it to be in itself clear, and as near as may be to the range of the variable one, conformity to this standard will be found matter of general convenience; and in proportion as the fixed import comes to be adopted, the varying one, in all its variations, will drop out of use.

What if, in this way, and by these means, the import of all words, especially of all words belonging to the field of Ethics, including the field of Politics, and therein the field of Political Religion, should one day become fixed! What a source of perplexity, of error, of discord, and even of bloodshed, would be dried up! Towards a consummation thus devoutly to be wished, there does seem to be a natural tendency. But, ere this auspicious tendency shall have been perfected into effect, how many

* Thus it is, that, in every instance, the proposed *test*, and the capacity of the division to endure the application of it, have been kept in view. The difference is—that, in some instances, in the composition of the appellatives in question, the application of this test has been actually made—made by the author himself,—in other instances left to the reader. If, in the eyes of any student in logic, this work should happen to find favour, the application of this test would, it is believed, be found capable of affording him a not altogether uninstructive exercise. But if, by the mere use of this instrument, in its present shape, instruction may thus be gained, much greater is the degree of instruction capable of being gained by the endeavour to improve upon it: and with whatsoever degree of success it may happen to any such endeavour to be attended, any labour thus employed, he may be well assured, so far as instruction to the labourer himself is a gain, will not be lost.

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centuries, not to say tens of centuries, must have passed away!

All this while, on the nearness of the approach made to a perfect coincidence, depend the strength and utility of the mental light capable of being reflected upon each other's import, by the two denominations, the *Encyclopædical* and the *trivial*. Hence comes the need of a *memento*, to which expression may be given by the following rule.—For determining the contents of the two *branches*, into which the *trunk* in question is to be divided, look out for that *distinctive property*, by the application of which such a pair of branches shall be produced, the imports of which shall come as near as possible to the imports of the two appellatives already in current use.

Of the above rule, in no instance will any neglect be followed by impunity. He who, taking up a word, gives a definition of it, issues thereby a requisition, calling upon as many as read or hear of it, to use the word in that sense. Let the word thus defined be a word of a man's own creation, in this case, if so it be, that for this new-invented instrument an adequate use can be found—provided also that the newly-attributed import is not contradictory to any import already attached to it,—if both these conditions are fulfilled, then so it is that for any expectation he may happen to entertain of seeing the requisition generally complied with, a substantial ground has been laid. On the other hand, if it be a word in common use, in that case, if the import thus newly endeavoured to be attached to it be to a certain degree at variance with common use, the consequence is—what?—that, against the sort of *law*, which he is thus taking upon himself to enact, he finds (nor is there any reason why he should not find) as many *rebels*, as there are persons, by whom, in its old established sense, the word has been in use to be employed.

Fixation, yes: this may be endured: comparatively at least, the thing is not difficult: the use is manifest. *Substitution*, no: the difficulty is extreme; and that difficulty not atoned for by any the smallest use.

1. Define your words, says the capital rule, laid down, and so much insisted upon, by *Locke*.—Yes: define your words.—But, in addition to this rule, a subsidiary one there is, the demand for which will, it is believed, be scarcely found less imperative.

2. In defining a word, if it be a word in current use, be it your care, that the import you are thus endeavouring to attach to it, be not only *determinate*, but as near to the *current* import, as a determinate import can be to an indeterminate one.

In the character of a distinguishable addition to the mass of instruction afforded by means of the *contradictory formula*, may perhaps be mentioned the series of those *definitions*, which thus in substance, and almost in form, presenting themselves at every joint, give to the whole system a degree of precision and compactness, altogether incapable of being infused into it by any other means. So many pairs of *branches* or *minor aggregates*, so many pairs of *definitions*: *major* aggregate, at each joint, a *genus*: its two immediate branches the two *minor* aggregates, its *species*: the *distinctive property*, with its negative, the two *specific* or *differential characters*. To this advantage a brief reference has been already made, viz. in the section (§ 9.) in which the particular characters of the Encyclopædical tree are brought to view.*

Such being the advantages, indicated by the terms *all-comprehensiveness*, *distinctness*, and *instructiveness*, as applied to a scheme of logical division,—in the next place comes the question—in what way, if in any, is the existence of these advantages attached to the use of the *bifurcate*, as contradistinguished from the *multifurcate* mode?

To this question the answer has probably, in the mind of many a reader, already presented itself. To the *bifurcate* mode alone, to the *bifurcate* mode, and not to the multifurcate, is the test of all-comprehensiveness and distinctness, viz. the *contradictory formula*, applicable.

After the explanation above given, exists there any person, in whose eyes, when compared with the *bifurcate*, the multifurcate mode would be preferable? To a tree, or any part of a tree, once constructed in the *bifurcate* mode, might be substituted a tree constructed in the multifurcate mode, without trouble and almost without a thought. Throw out the Encyclopædical names, put together the current names—the thing is done. The plan of division pursued, suppose it all along all-comprehensive and distinct, the all-comprehensiveness and the distinctness would, after this change,

* [*Definitions.*] These definitions present themselves naturally in the character of *answers* to so many *questions*, which, in a course of instruction, administered in the mode now so well known by the name of the *interrogative* mode, might be applied to the matter of any such scientific tree. And thus, pursuing the phraseology, as well as the method applied in the *National Society* Schools to the *Church-of-England Catechism*, we have the matter of the *tree of art and science* "*broken into short questions*." In what degree soever, on the superior ground of importance the matter of this Encyclopædical tree may fall below the matter of that consecrated formulary, on the ground of facility of intellection it will scarcely be thought to yield to it.

1. What is Mathematics? *Answer*. The branch of art and science which has for its subject *quantity*.

2. What is the Encyclopædical name for Mathematics? Answer. *Posology*.

3. What is *Geometry*, expressed in the Encyclopædical language? Answer. *Morphoscopic Posology*.

4. What is *Arithmetic*, expressed in Encyclopædical language? Answer. *Alegomorphic Posology*.

To the above will be added, of course, the questions adapted to the extraction of the requisite ulterior explanations. But of these the above sample will, it is believed, be found to suffice.

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remain to the matter as expressed in the multifurcate mode; but the *proof* of its being *all-comprehensive*, the *proof* of its being *distinct*, and the *instruction* afforded by the language by which this proof is expressed, all this would be gone. After these deductions made, by this means, out of a system constructed and exhibited in the *bifurcate* mode, you might have remaining a system equally good, constructed, or at least *exhibited* in the *multifurcate* mode. Constructed! Yes; but in what manner! Exactly in the manner in which, in his oration given to an audience of *Shoemakers*, *Orator Henley* showed them how, by one man, a gross of *shoes* might be made in a day: viz. by cutting them out of a gross of *boots*.

Of this conversion the converse would not be altogether so easy. Nor indeed, without addition, supposing the multifurcate tree to be, in any one of its ramifications, less than all-comprehensive, would it be possible. On the opposite supposition, however, i. e. if in every one of its ramifications it be supposed to be all-comprehensive, the converse would be possible. Of the required *bifurcate* tree, the matter would, on this supposition, *in part*, though only in part, be given; and, as to the mode of filling up the deficiencies it has already been explained, and may be seen exemplified in the Table.

Of a division, which in the article of *all-comprehensiveness*, is *deficient*, an example, should any person be desirous of it, may with equal facility be extracted from the same Table. Take, for instance, *Natural History*: branches, upon the multifurcate plan, supposing it in the execution all-comprehensive, *three*, viz. *Mineralogy*, *Botany*, and *Zoology*. Suppose any one of them left out, thus, instead of the *all-comprehensive* division, you have an imperfect,* or, as Euclid might have said, a *deficient one*.†

That, for obtaining a clear, correct, all-comprehensive and commanding view of the contents of any logical aggregate or whole, *bifurcate*, in contradistinction to *multifurcate*, is the only adequate mode, another consideration may perhaps help to satisfy us. Of two objects, and no more, can the eye of man, (whether it be of the bodily and real, or the mental and fictitious organ, that the word be understood as designative,) obtain any usefully distinct view at the same time. Vibrating, as it were, between the two; and at each vibration, *applying* (as *Euclid* might have said) to the *impression* made by the one, the still vivid *idea*‡

* Of an imperfect division, *Watts*, in his Logic, undertakes to give an example. But on this occasion he seems not to know very exactly what he is about. The sort of *aggregate*, which belonged to his subject, was a *logical* aggregate—a *genus*: such as this Table exhibits in every part of it. The sort of aggregate which he employs for his example is a *physical* aggregate:—an *individual*—any individual of the genus *tree*. The division which he gives, as an example of an imperfect one, is that of a *tree* into *trunk* and *leaves*. What in his view renders it an imperfect one, is but the want of mention made of *root* and *branches*. Not to speak of other parts, two much more important deficiencies are, the want of *flowers* and *fruit*. But the lights struck out by *Linnæus*, had not as yet shone upon the field of *Physiurgics*.

Immediately afterwards, he takes up, indeed, a *logical* aggregate: viz. *Logic* itself. But, for want of some words, perhaps, that were necessary to complete the expression, instead of light, the result is thicker darkness. *Logic*, he supposes, divided into *apprehension*, *judgment*, and *reasoning*. This division gives us another example of an incomplete one: for, to render it complete, *method*, he says, should have been added: of the *art* in question (meaning *logic*,) *method* (he says) is a considerable part. Be it so: but *apprehension*, is it also an art? No, surely. Of the art and science of logic it may be taken for one of the *subjects*:—true:—but itself it is neither *art* nor science. Thus, confounding the *subjects* of an *art* with the *art* itself, what he gives as an example of the division of a logical aggregate, is—a division of it into four parts, of which no more than one can, with any sort of propriety, be spoken of as a part of that same whole. No; nor even *that*, without a force put upon the import of the word. To express a species of *art*—to express an *operation*—*methodization*, not *method*, was the proper word: *method* is—not the *operation* itself, but the *result* of it.

† Elements, book vi. p. 28.

‡ *Impression*—viz. the effect produced in the mind, at the very time when the object, which is the source of it, being present to bodily sense, is actually the object of the faculty of *perception*:—*idea*—viz. the effect produced when the object, not being so present, is—or rather the impression made by it as above, is—the object of the faculty of *memory*. The first writer, it is believed, by whom this distinction, so necessary to every clear and correct perception of the phenomena of the human mind, was held up to notice, was David Hume. A consequence is—that, where *observation* is made, of the existence of this or that *relation*,—and, on that occasion, *comparison*, as above, is spoken of as being made, or *distinction* as having place,—if the number of the objects in question is greater than *two*, he, who has to speak of the *relation*, the *comparison*, or the *distinction*, finds himself in a very awkward dilemma. By the preposition *among*—it being scarcely in use for this purpose—scarcely is the import in question presented to view. Comparison of object *with* object, yes: comparison *between* object and object, yes: comparison *between* objects, yes: comparison *among* objects—comparison, for example, *among those three objects*—scarcely: So as to *relation*. Relation of object *to* object, yes: relation *between* object and object, yes: relation *between* objects, yes: relation *among* objects—relation *among these three objects*—scarcely. And so, in the instance of the word *distinction*. In these cases what shall be the word employed?—Shall it be the word *among*? Scarcely is the import conveyed: or, if it be, it is not without the idea of impropriety for its accompaniment, that the conveyance of it is made. *Comparison*, *relation*, *distinction*, among these three?—scarcely will any such phrase be endurable. Shall it be the word *between*? *comparison between three*? *relation between three*?—the hue of self-contradictoriness

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of the other, one by one it *can* compare them; but if any greater number, say *three*, be presented to it at the same time, then so it is, that, for any such purpose as that of obtaining a perception of those reciprocal points of coincidence and diversity, ere it can bestow upon them a steady and persevering consideration, it will find itself under the necessity of dividing them, in the first place, into *two* lots; in one of which it will place one of them, and in the other lot either it will place one alone of the two remaining objects, or if both, then, for the purpose of comparing the other object of the comparison, the *two* will be put together, and, by conjunction in the same lot, be in imagination reduced to *one*.

Endeavours are used (suppose) to consider and compare all three at the same time. What will be the consequence?—that, while any two of them are thus kept in comparison, the third, before any clear and decided judgment can be formed in relation to these two, will be obtruding itself. Confusion will thus ensue: and a necessity will be found of recommencing the comparison: and so *toties quoties*.*

One word more on the subject of *instructiveness*. In the exhaustively bifurcate mode,—in and by means of the ramified chain of virtual definitions which have been brought to view,—at each joint a pair or rather a triplet of *relations*, has been brought to view: viz. the relation of each *minor aggregate* to the immediate *major aggregate*, and the relation of each *minor aggregate* to the *other*: the two first, relations of *identity* and *coincidence*; the third, a relation of *diversity* and *separation*. But, of every object of the understanding, be it what it may, the nature is the more thoroughly known, the greater the number is of those *relations*† which it is seen to bear to *other* objects: and, were it only in virtue of its being *an object of the understanding*, every such object bears some *relation*—in truth a multitude of relations to every other. By *Algebra*, whatsoever riddles are solved, are solved—whatsoever is done, is done—by the converting of this or that *unknown* quantity into a *known* one: a conversion, which neither is, nor ever can be, effected in any other way, than by means of a *relation* which it bears, viz. the relation termed the relation of *equality*,‡ (which, in a case that affords nothing but *quantity*, is the same as the relation of *identity*,) to such or such other quantity or quantities, which were known already.

No object is known, but in so far as its *properties* are known: and, for every property, the manifestation of which depends upon any other object, a correspondent *relation* between

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presents itself upon the very face of the phrase. By one of the words in it, the number of the objects is asserted to be *three*: by another it is asserted to be no more than *two*.

Be this as it may, the confirmation which, from this particularity in the language, though it should be found to be in no more than one language, the notion in question receives, seems equally manifest. To the use thus exclusively made of the word *between*, what could have given rise, but a sort of general, howsoever indistinct, perception, that it is only *one to one* that objects can, in any continued manner, be commodiously and effectually compared.

* On the very face of the portion of language, with which the hand of custom has covered this part of the field, may be seen a testimony—nor that a weak one—in favour of the conception thus hazarded. *Distinction between* is the phrase, not distinction *among*: *comparison between*, not *comparison among*.—Why?—*Answer*. Because it is only *between two* objects that any clear *perception* of distinction can be obtained at the same time:—because to no greater number of objects than *two* can the *faculty* and correspondent *operation* of *comparison* be applied at exactly the same point of time.

Many, in a word, are the occasions on which,—it being supposed that of certain objects a survey is to be taken, and that survey a *conjunct* one,—it will be found, that, of the two words here in question, viz. *between* and *among*, it is the former only that can with propriety be employed: and, besides these just mentioned, on many others, if not on all occasions, will the like testimony, it is believed, be seen to be afforded.

The truth is—that, on this ground, the English language labours under a defect, which, when it is compared in this particular with other European languages, may perhaps be found peculiar to it. By the derivation, and thence by the *inexcludible* import, of the word *between*, (i. e. *by twain*,) the number of the objects, to which this operation is represented as capable of being applied, is confined to two. By the Latin *inter*—by its French derivation *entre*—no such limitation seems to be expressed.[a]

† [*Relations* ..... *to other objects*.] When first penned, the passage stood as follows:—"*It is only by means of such relations as it bears to other objects, that any object can be known*."..... Without explanation, this (it might have appeared) would have been going too far: for, supposing the object in question to contain *parts*, on this supposition the relations which it bore to other objects would not comprehend more than a portion of the whole number of relations of which it was susceptible: in addition to them, there would remain the relations borne to each other by its several *parts*. The only supposition, therefore, on which the position thus discarded would be strictly true, is this, viz. that the subject of it is an *atom*:—an object too minute to be divisible into parts. On this supposition, if deduction were made of all relation, borne by this atom to objects exterior to itself, after such deduction there would not remain any relations at all. For in the very import of the word *relation*, two objects at least, between which it is considered as having place, are comprehended. No *powers*, for example, could the *atom* have: Why? Because no subject would it have to operate upon.

‡ Hence the term *equation* applied to algebraical propositions.

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[a] To the *Greek*,—the set of *prepositions* which that language furnishes being wretchedly ambiguous, unappropriate, unexpressive,—in vain, on such an occasion, could any reference be made.

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the two objects must be acknowledged to have place.*

Section XIII.†

Exhaustiveness, as applied by Logical Division —the idea whence taken—Saunderson's Logic —Porphyrian or Ramean Tree—Hermes.

To the author of these pages, the first object by which the idea of *exhaustiveness*, as applied to *logical division*, was suggested, was a chapter of Saunderson's Logic, which has this operation for its subject. Much about that *same* time, viz. some four and fifty years ago, on the occasion of a set of College-Lectures, in which that book of Saunderson's was employed as a text-book, the copy of it, now lying on the table, received in manuscript a copy of a diagram of a logical tree, therein called *Arbor Porphyriana*—the Porphyrian Tree—exactly

* *Caution, to prevent that misconception, by which* Aristotle, *after bewildering himself, kept the thinking part of the world bewildered for little less than two thousand years—by which he put out the eyes of the otherwise powerful mind of* James Harris—*and which, by* Bacon *and* Locke, *has scarcely ever yet been completely done away.*

Lest, to the instrument here employed, viz. the *contradictory formula*,—employed as here in the character of a *test* of, and *security* for *all-comprehensiveness* and *distinctness*, in a logical division,—any extraordinary powers, beyond those which really belong to it, should be ascribed—lest, by being employed in the composition of propositions wearing on the face of them the form of *demonstration*, a degree of conclusiveness, independent of *observation* and *experiment*, and superior to anything which by means of those instruments of knowledge can be produced, should be supposed to be attainable,—this caution is subjoined:—a caution, which, however, to those who by an adequate conception of, and a sufficient attention to, the discoveries made in the region of mind by Bacon and Locke, have learnt to recognise the emptiness of the Aristotelian philosophy, will at the utmost be no more than a *memento*.

Yes, upon *observation* made of individual *perceptions*, and upon the correctness with which it has been made, and the judgments grounded on it deduced, will depend, in every instance, the truth of whatsoever propositions of a *general* nature can, upon that part of the field of thought and action, to which these same individual perceptions and judgments appertain, be framed and delivered.

By general words, a truth, in so far as ascertained by individual observation, may indeed be *expressed*: but, it is not by stringing together general words, be they what they may, or in what number they may, that truth can be *proved*: i. e. that sufficient ground for regarding any one of these propositions as true—any of the properties in question as really appertaining to the subject in question—can be afforded.

Of the formulary, here proposed in the character of a *test* of *all-comprehensiveness* in the division to which it is applied, what then is the real function and use?—*Answer*. To point the attention of the reader to the individual matters of fact, on which the possession of this property depends: to point the attention to them, viz. by the means of a pointed form of words, by which the existence of them in all the individual subjects in question is asserted in explicit terms.

That all *living bodies*, (turn here to the Ramean tree, Table IV.) that all *living bodies*, other than those that are *sensitive*, are *insensitive*,—this, for example, is what can be neither denied nor doubted of.—Why? Because the assertion thus brought to view has, in truth, for its subject, nothing more than the import of certain words, compared with certain others:—words, the import of which is on both sides fixed by universal usage.

But that all the *living bodies*, which are called *animals*, are *sensitive*, i. e. possess the property of sensation,—of this proposition the truth depends upon individual observation: viz. partly upon the observation, that bodies, which at first view have been supposed to possess sensation, have upon further observation and experiment been found to give further indications of that property; partly upon the observation, that,—in whatever instance body has been found or supposed to be possessed of that same property,—*animal*, and not *plant*, has, of these two correspondently extensive names of classes, been the name to which it has been wont to be referred, as well as the name by which, in common language, it has been wont to be designated.

Of these two observations, the first is an observation relative to the *nature of things*; and the field it belongs to is that of *Natural History*: the other is an observation relative to the *import of words*: i. e. relative to the usage which, among that portion of the human species, by which the language in question has been employed, has obtained in respect of the *things*, or real objects, for the designation of which the *words* in question have been wont to be employed; and the *field* it belongs to is that of *Language*.

It was by fancying that everything could be done, by putting together a parcel of phrases, expressive of the respective imports of certain *words*, mostly of certain *general* words, without any such trouble as that of applying *experiment* or *observation* to *individual things*,—that, for little less than two thousand years, the followers of Aristotle kept *art* and *science* nearly at a stand.

In the present instance, what may be seen is—that, already, in whatsoever may have presented itself in the character of a *demonstration*, among the *data* of it, the existence of the property, the existence of which is the object of such demonstration—the existence of that property in the *subject* in question, viz. in the *division* in question—is virtually assumed. In and by the remainder of the process—in and by the demonstrative part itself—what then is it that *is* or *could be* done? Nothing more than to show, that to the two *branches* or *minor aggregates* in question that *formula* is truly applicable, which, wherever it is found to be truly applicable, is received,—or at any rate is fit to be received,—as a compendious *indication*,—and, in so far as the individual assertions included in it are *true*, i. e. agree with the nature of *things* on the one hand, and the usage of

† For further elucidation on the subject of this and the succeeding sections, see the subject of division, as treated in the work on Logic in this volume.—*Ed.*

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nated by the word *Substantia*, employed by the Latin such Divisions being designated by their several *single-* hich are expressed the mutual relations borne by one nding divisional operations, to which the matter of the ogical Divisions, executed in the *exhaustively-bifurcate* n and by the denomination given to the *negative* one of ARISTOTLE's Commentators, in his *Isagoge*, i. e. Intro- 7. To the Letter-press is there attached a sort of *us*, considered as one single object, the object designated ntities. Concerning this Diagram, see Chrestomathia,

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No. II.

OR PORPHYRIANA *in a supposed amended form*: more explicit, and sup-, in other respects, now somewhat improved.

I. SUBSTANTIA *est*

vel corporea, viz. CORPUS; — *vel incorporea, viz. SPIRITUS.*

II. CORPUS *est*

vel vitale, viz. VIVUM; — *vel non vitale,*

III. VIVUM *est*

vel sensitivum, viz. ANIMAL; — *vel insensitivum, viz. PLANTA.*

V. ANIMAL *est*

le, — *vel irrationale,*
O; — VIZ. BRUTUM.

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in the state in which it is represented in Table IV., No. I. In Table IV., No. II., it is exhibited with some little alterations, which, on the present occasion, might serve, it was thought, to render it somewhat more readily intelligible.

In this same work of *Saunderson's*, in a list iven of the commentators of Aristotle, the very first place is occupied by this same *Porphyrius*. Yet, useful as it not only is in itself, but more particularly useful as it might have been made, to the purpose of affording exemplification and illustration to some of the instructions contained in that same work of Saunderson's, in no part of that work is any reference to it to be found.*

By every eye, by which this prime and most ingenious example of logical analysis is glanced at, the divisions made by it may at one glance be seen to be, at each step, *bifurcate*. By every one who, in this point of view shall have had the patience to examine into it, it will be found to be at every such step *exhaustive*.

On the subject of *Division*, Saunderson has —for, in following out and paraphrasing the system of Aristotle, he could not fail to have— a chapter. Amongst other rules for the performance of this operation, he requires that it be *exhaustive*—that it possess this property. In that chapter, had it occurred to him to avail himself of the exemplification thus already given of this his own rule, he might have exhibited to his readers a specimen of division, which, being throughout *bifurcate*, is throughout *exhaustive*. In so doing, after causing his readers to observe, that it is *bifurcate*, he might have shown to them, in the first place, that it is *exhaustive;* in the next place, that it is by its being bifurcate that it is rendered capable of being proved to be so; and, lastly, that by the mutual contradictoriness of the two propositions, the import of which is suggested by the pair of denominations presented by each pair of branches, the proof of its being so is actually afforded.†

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language on the other,—as a commodious *test*, and *provisional proof*, though no more than a *provisional proof*, of the existence of the property in question in the subject in question: viz. in the present instance, of the property termed *all-comprehensiveness* or *exhaustiveness*, in the system of divisions supposed and asserted to be possessed of it.

It is from such truth as there is in the included *particular*—yes and even *individual*—propositions, that whatever truth there is in any more general one is originally perceived,—not *vice versâ*. A general proposition is but an aggregate of individual ones: it can only be in so far as the individual propositions contained in it are true, that in the general proposition by which those individuals are contained any truth can be to be found.

The case is—that all *perceptions* are not only particular but *individual*. In so far as it goes beyond actually existing individuals on which the actual observation has been made, every general proposition,—how well warranted soever the *induction* is by which it has been formed,—how useful soever it is when applied to practice,—and how truly soever the sensation it produces in the mind is different from that produced in the same receptacle by any one of the individual observations of which it contains the assertion,—is still but a figment—the mere figment of the imagination.

Hence—once more, and for the last time—it is only in the character of a *provisional* test that this *general* formulary is presented. In *observation* and *experiment*—observation and experiment having for their subjects *individual* objects—in these are the only *original*, and in case of dispute or doubt, the only *definitive* tests to be found.

To give to mere assertion the appearance, and for that purpose the *name* of *demonstration*, is a contrivance, invented and brought forward, probably without seeing the hollowness of it, by *Aristotle*, and which, down to the present day, either from inability or from unwillingness, to recognise the hollowness of it, polemical writers have not yet prevailed upon themselves to abstain from the use of. The proposition which a man stands engaged to support, is in its nature a self-contradictory one, and thereby a mere heap of nonsense,—expressive neither of truth nor even so much as of falsehood?—Nothing will serve him but he must give *a demonstration* of it. The more palpable the absence of all genuine instruments of persuasion, the more urgent the demand for fallacious ones.

* From the Greek of the *Isagoge* of *Porphyrius* —i.e. his Introduction to the Aristotelian System of Logic—this diagram is supposed to have been translated. But it was the Latin translation, as it stands in No. I.—a Latin translation in manuscript, and not the Greek original in print—that was put by the tutor into the hands of his pupils: nor has it ever happened to this one of them to have had a copy of it under his eye.

† Since what is in the text was written, an opportunity has been obtained of consulting the work of *Porphyrius:* and the result is—that most improperly has this diagram been ascribed to that wordy and cloudy pre-expounder of a nebulous original.

An edition of *Aristotle's Organon*, (i. e. *System of Logic*,) to which is prefixed the Introduction, ascribed to *Porphyrius*, is now on the table: it is that published by *Pacius*, with a Latin Translation, at Frankfort, Anno 1597. In the Greek there is no diagram. In the Latin alone is there any diagram.[a] But, in the Greek, what is described is— not *a tree*, but a mere *nest of boxes*, one within another. In the Latin diagram, the image presented has in it something of *a ladder*, but nothing at all of *a tree*.

The truth is—what is brought to view by *Porphyrius* is not a system of *divisions;* it is nothing more than a system of *logical subalternation*. Of the materials of the diagram here exhibited, it has not any of the *negative* branches: it has none but the *positive*. Genus Generalissimum, Ουσια: next to and within ουσια, σωμα: next to and within σωμα, ἐμψυχον σωμα: next to and within ἐμψυχον σωμα, ζωον: next to and within ζωον, λογικον ζωον: next to and within λογικον ζωον, ἀνθρωπος. To Grecians it will, without explanation, be manifest enough, how clumsy and incorrect the workmanship is of this *nest of boxes;* how much inferior to that of the *Latin tree:* to non-Grecians, it seems

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[a] Pp. 8, 9.

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Planted and firmly rooted, by the logical work of Saunderson, the conception of the necessity of the property of *exhaustiveness* to an adequate division, received, at a later period, further confirmation, as well as illustration, from the grammatical work of *James Harris*.

Upon reference now made to that work, no such word as *exhaustiveness* or *all-comprehensiveness* has been found in it; but by the word ALL, repeatedly decked out in emphatic capitals, and reinforced by the word *whatever*, together with the division made of the contents of it, by the words *either* and *or*, the idea was plainly meant to be conveyed, and was accordingly brought to view. Whether in the instance of every one, or so much as any one, of the divisions there exhibited, that quality is given to it, has not, for the present occasion, been thought worth inquiring into. What is certain is, that, for proof of the existence of that quality, neither the *test* here in question, nor any other, is there brought to view. What is also certain is, that, be they as they may in regard to *exhaustiveness*, or say *all-comprehensiveness*, in regard to *distinctness*, the divisions exhibited in *Hermes* are stark naught.

Under the name of *attributives of the second order, adverbs*—all *adverbs*,—are there given as being in their import, *distinct* from the three parts of speech following: viz. from *substantives*, for example *place* and *time;* from *attributives* of the first order, for example the pronoun adjective *this;* and from *connectives*, for example the preposition *in*. Unfortunately, to look no further, in the import of every adverb designative of *place*, and in that of every adverb designative of *time* may be found the several imports of the three several parts of speech, from the imports of which, the import of an attributive of the second order had, in that division of Harris's, been represented as distinct. Adverb of place, *here;* i.e. *in this place:* adverb of *time, now;* i.e. *in* or *at this time:* and so in regard to QUALITY, MANNER, and so forth.*

SECTION XIV.

Imperfection of the current Conceptions relatively to Exhaustiveness and Bifurcation;—ex. gr. 1. *in Saunderson's Logic.*

Of the systems of logical division, which, for one purpose or other, are so abundantly framed, and so continually observable, many there are, which, in some of their ramifications, particularly those which are the nearest to the trunk, will be seen to be *bifurcate;* nor can it be doubted, but that of these again a large proportion would, upon the application of the above test, be found to be *exhaustive:* and, lamentable, indeed, it would be, if—in those arrangements, by which, on all sorts of subjects, men's conceptions are settled and determined—a property which by all logicians, has been acknowledged to be the inseparable ac-

scarcely worth explaining. Thus it appears, that, of this admirable instrument, scarce a trace is to be found in the work of this *Porphyrius*, by whose name it has been found designated. No ramification, no division, is to be found in it: no ramification, consequently no place for that *contradictory formula*, by which the relation of the contents of the branches, to one another and to the trunk, is so satisfactorily expressed.

Wonderful, therefore, it is, how, among logicians,—or from the pen of so much as a single logician, of the Aristotelian School,—the diagram in question should have been ascribed to this Porphyrius. The probability seems to be, that the inventor of it was no other than *Peter Ramus:* that *Ramus*, whom we have seen, and shall see again, so slightingly spoken of for the use he made of it.[a]

In the text of this section,[b] when, from the name under which it was handed down, the diagram was concluded to have been the invention of *Porphyrius*, it was mentioned as matter of surprise, that Saunderson had made no use of it. Though the ascription of it to Porphyrius was, as above, the result of misconception, the ground for surprise remains without much alteration. To *Saunderson* the works of *Ramus* were known, for he refers to them. By *Ramus*, what is certain is—that for the bifurcate mode of division a strong predilection was entertained, and abundant use made of it: what seems highly probable therefore, is—that the divisions, thus made by him, either, were, or were intended to be, exhaustive.

According to *Moreri*, (verbo *Ramus*) on the subject of *Logic*, (for he wrote on *Mathematical* and other subjects) the works he wrote were intitled *Institutiones Dialecticæ*, and *Aristotelicæ Animadversiones*, Anno 1543:—his books were condemned, and he turned out of his Professorship, he not being at that time more than twenty-eight years of age. Being the declared opponent of Aristotle, the wonder is how, for that time, he escaped with life.—Being moreover a Protestant, he suffered for both sins at once, being comprehended in the Bartholomew-tide Massacre, Anno 1572.

In some of our public libraries, not to speak of private ones, these works of the ingenious Frenchman—gallicè, Pierre Ramée, latinè, Petrus Ramus—would be to be found of course. What he found to say against *Aristotle* would at least be matter of curiosity, though, considering at what time of day he said it, probably not of much use.

[a] The Porphyrian tree, in its usual Latin form, is found in use before the time of Ramus: *e. g.* by Boethius and others.—*Ed.*

[b] P. 111.

* Some five-and-forty years ago was the discovery of this imperfection made. What led to it was this. Observing that, to the divisions made in that work, the quality of *all-comprehensiveness* was therein ascribed,—and concluding that accordingly, in the contents of it, matter, fit for the being represented as endowed with that quality, would throughout be to be found,—thereupon, by way of exercise, taking the text of it in hand, the author of these pages set himself the task of exhibiting it in the form of a *Ramean* tree: but, not to speak of anterior sources of perplexity, no sooner did the *test* come to be applied to the *attributives of the second order*, than the delusion vanished, and the operation was found to be impracticable.

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companiment of a good and adequate system of division, and thence indisputably necessary to a complete and sufficient comprehension of the subject, were not frequently to be found.

Not very frequently, however, in giving denomination to the component parts of the division, are those names employed, those correlative and contrasted names, by which, as above, the test of plenitude is actually applied.

On this occasion three institutes of logic have been referred to: viz. *Bishop Saunderson's*, in Latin; *Dr Watts'*, in English; and the view given of the Aristotelian Logic, by *Dr Reid*, in *Lord Kaimes's History of Man*.

Of all the views that have ever been given of Aristotle's System of Logic,—concise, nervous, compact, methodical, well-divided,—*Saunderson's* would, it is believed, be found by far the best; several others, which for this purpose were taken in hand, seemed far inferior to it.

In England, at any rate, *Watts'*, as being in English, and furnished with familiar illustrations,—*Watts'*, though diffuse, and teeming with anilities, appears, by the multitude of the editions, to have been the most in use.*

Posterior, by a generation or more, to Watts', as that is by several to the Bishop of Lincoln's, the view given in the work of *Kaimes* presents in conjunction the authority of two distinguished Scottish writers.

To no one of all these writers does the utility and excellence of the exhaustively bifurcate method, or so much as the use actually made of it in the *Ramean tree*, appear to have made itself sufficiently sensible. By all of them the bifurcate method is indeed mentioned.—Mentioned? But for what purpose? Scarcely for any other purpose than the being slighted. By *Reid* and *Kaimes* it is even taken for a subject of pleasantry: but of pleasantry (it will perhaps be seen) not very happily applied.

1. First, as to *Saunderson—Lib.* i. *Cap.* 18. *De Divisione.*

After stating, that, on the occasion of *division*, the *whole*, (say rather the *aggregate*,) which is taken for the subject of the operation, is called the *divisum*, (say rather *dividendum*,†) and that the *parts* into which it is divided (viz. the *parts* which are the results of the operation) are called the *membra dividentia*,—(he immediately after designates them by the more expressive adjunct *condividentia*,) i. e. the *divident*, or, more expressively, the *condivident* members,—he proceeds to give his *rules of division*: the rules, in conformity to which, the operation should, according to him, be carried on. They here follow in so many words.

1. *Membra* ABSORBEANT *totum divisum. Let* the *members* absorb (i. e. include, comprehend, comprise) the whole of the *dividendum*; in other words, let the division be *exhaustive*. Let the division be performed in such a manner, that, if of the parts, which are the result of it, the contents are summed up, in the sum of them, the whole sum of the contents of the dividend will be found.

2. *Divisum esto latius singulis suis membris; adæquatum universis.* Let the *dividendum* be more extensive than each of its members; *equal*, or say *commensurate*, to all of them put together. After laying down the first, to add, in the character of a distinct one, this second rule, was sad trifling; it shows, as it should seem, that, on this subject, the ideas of the author were far from being clear ones.

Two separate parts does this rule of his include; each of them in its form a distinct rule. But in substance and import, the second part of this second rule is identical with the first rule; and the other part is as obviously as it is necessarily included in both: in the first rule, and in the second part of this same second rule.

To say of *a part* that it is *equal* to *the whole*, would be neither more nor less than a self-contradiction *in terminis*—a self-contradictory* proposition.

* Of all the colleges in the university of Oxford, Queen's College was, in the year 1761,—and, for aught the writer of this has heard, continues to be,—the one, in which the art and science of *Logic* was and is cultivated with most attention. In those days, Saunderson's and Watts', as above, were,—and, for aught he has heard, continue to be, on this subject,—employed there in the character of the earliest, if not the only institutional writers.

† *Dividendum*, rather than *divisum*, seems to be the more proper term, in so far as the *time*, at which the subject is taken into consideration, is anterior to that at which the operation has been performed upon it: and the first-mentioned is the time which seems to have been in view on the occasion of some of the ensuing rules.—The *dividendum*, not the *dividend*, for fear of running foul of the Threadneedle-street *Bank*.

* By this unfortunate mass of surplusage, another source of confusion will be seen to be opened.—On the supposition, by which the field for the application of these rules is marked out, a *problem* is proposed. Of this problem the *subject* is supposed to be already determined, viz. the *aggregate*, of which a division is to be made. Upon this subject it is, that, according to this same supposition, an operation is to be performed, viz. that of *division*. Of this operation, when performed, the *condivident parts* or *members* will be the *results*: of which several results the contents will, of course, respectively depend upon the scheme or mode of division, which shall have been pursued. Here then all that is supposed to depend upon the operator, is the *mode* of *the division*, and therefrom the *results* of it: that which, as being, by the supposition, already determined, is supposed *not* to depend upon him, is,—the *dividendum*—the aggregate upon which the operation—the division—is to be performed. Of these conditions of the problem, necessary as is the perception and comprehension of them to any clear and correct conception of the nature of the operation and the work, so it is, that by this institutionalist no clear conception seems, on this occasion, to have been entertained. Addressing himself to the operator, the direction which on this occasion he gives is—how to frame his *dividendum*.

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3. *Membra condividentia sint contradistincta et opposita;* to which, by way of explanation, is added, *ita ut confundi nequeant vel coincidere.* Let the condivident members be contradistinct (viz. from each other) and opposite; in such sort that they shall not coincide or be capable of being confounded.

By this explanation no very clear light seems to be thrown upon the subject. What seems to be meant is, that, after the division has been made, things shall be in such a state, that of no one of all the several distinguishable articles or masses of matter, contained in the whole dividend, shall any portion be found to lie, part in one of the members, other part in another. In so far as any such incongruity is found to have place, the division, it is evident, is *indistinct*, and, being indistinct, is therefore *imperfect;* the operation has not been completely performed. On the subject of *distinctness*, see above, § 12.

4. *Divisio fiat in membra proxima et immediata, et (quam fieri commodè potest) paucissima.* Let the division be made into the nearest and (so far as convenience allows) fewest members. Then immediately after, in the same paragraph, and under this same 10th head or rule, he goes on to say—*A proximis porro ad remotiora et minutiora descendendum per subdivisiones.* From the nearest, (viz. members,) to those which are more remote and *minute* (say rather *less extensive*) let descent be made by sub-divisions.

In the instance just brought to view, of the second of these rules, the substance of one rule being, in other words, given over again, was given in the character of a distinct and different rule. In the instance of this 4th rule, two rules, perfectly distinct, are confounded under one head, and represented as constituting but one and the same rule. On this last occasion, a new case, or state of things, is brought upon the carpet: viz. the case, in which, by the repeated application made of the operation of division, to the results of a former division, the operations with their results are thus carried on as it were in the form of a *chain*, or rather (as hath been seen) in the form of a *tree.*

Dichotomiæ (he goes on to say) *sunt laudatissimæ, ubi commodè haberi possunt; non tamen nimium superstitiosè et anxiè ubique venandæ; quod faciunt Ramæi.* For division, the dichotomous (i. e. the bifurcate, or two-pronged) mode is most to be commended, when it can conveniently be employed; but it ought not to be everywhere hunted out too superstitiously and anxiously, as it is by *the Rameans.* In this translation, the expression, it will be seen, is bad enough; and in the original it is still worse. It is composed of a cluster of *tautological*, or (as they are also called) *identical* propositions; a sort of verbiage, the natural growth of a weak mind, and of which every mind, that is not a weak one, will, as it values its character, avoid being seen to make use. What ought not to be employed, ought not to be employed. On an occasion on which it *ought not*, an instrument of the sort in question *ought not* to be employed. *What ought not to be done, ought not to be done.* This is the language of a driveller in his dotage.

This instrument, which, at the first mention, is pronounced to be a commendable one, and of which therefore it cannot but be true that, on some occasions at least, the employing of it is a proper course to take, what are the occasions on which it is convenient, and thence proper, what the occasions, on which it is not convenient, and thence not proper? Such are the questions, by the answers to which, and not otherwise, the reproach of *tautologism*, incurred as it is by the observation, as it stands, might have been wiped away.

Section XV.

II. *Watts' Logic.*

In his chapter, intituled *Special Rules to direct our Conception of things*, Sect. 8. *Of Division and the Rules of it*, Watts delivers on this subject a set of rules; of which, according to his numeration, the number is *six.* But in that which calls itself the sixth, may be seen two perfectly distinct ones.

By anything like a thorough examination of them, much more room would be taken up than can here be spared. The fourth, and the last part of the sixth, are the only ones that have any direct bearing on the present point.

1. "Let not sub-divisions (says the fourth) be too numerous without necessity." Here we have *anility* in a still worse form, than as above in *Saunderson.* Anile tautology patent; self-contradiction latent. "*Let them not be too numerous:*" this is plain *identicalism* and nothing more: add, "*without necessity,*" the identicalism is now topped by self-contradiction. Good simpleton! what mean you by the word *too?* Know you then of so much as an imaginable case, in which there is a "*necessity*" that anything should be "*too*" anything? in which that which ought *not* to be done *ought* to be done?

2. Lastly, as to that second part of his Sixth Rule—"*Do not,*" says he, "*affect Duplicities, nor Triplicities, nor any certain number of Parts in your Division of Things;*" "*For,*" (continues he, and then come reasons, in which not much application to the subject has been perceived) "*yet,*" (continues he,) "*some persons have disturbed the Order of Nature, and abused their Readers by an affectation of Dichotomies, Trichotomies, Sevens, Twelves, &c.*"

The section then concludes with another

But, on this same occasion, according to the conditions of the problem, he is not to frame it at all: it is ready framed to his hands.

Upon the whole, what seems evident enough is—that, taken in both its parts, this second rule is worse than useless, and that the complete erasure of it would be an improvement.

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effusion of *anility*, condemning what he calls "a too nice and curious attention to the mere formalities of logical writers, without a real acquaintance with things."

What applies more particularly to the subject here in hand, is, that this division, into no more than *two* parts at each operation, is, in the scale of usefulness, placed by him upon a level, not superior to that of division into any other number of parts; to this or any one number, in comparison of any other, any preference that can be given is equally ascribed to no better a source than *affectation*. Thus what is plain is, that to his *eyes*, as already observed, the matchless beauty of the *Ramean* tree, the test which it affords of exhaustiveness, had not displayed itself.*

SECTION XVI.

III. *Reid and Kaimes, in Kaimes's History of Man.*

In Lord Kaimes's work, entitled *Sketches of the History of Man*, is contained "*A Review of Aristotle's Logic*," which he declares to have received from Dr Reid. In general, the account there given of that work, is, it may be presumed, correct. But, in the particular passage which now stands for consideration, his lordship's froth seems, in a dose more or less considerable, to have mixed itself with the phlegm of Dr Reid.

On this occasion the exhaustive mode came under his review:—he begins with a declaration of its usefulness: he ends with an attempt to turn it into ridicule.

He acknowledges it to be good: but, at the same time, finding the use of it to be attended with some difficulty, and *that* a difficulty with which he did not feel himself in a condition to cope, he vows revenge, and, to accomplish his vow, applies to *Momus*.

Ascribing it, and as it should seem with reason, to the above-mentioned Ramus, he calls it *new*: in that character it becomes fair game for ridicule; and with ridicule it seems to him that he has completely and sufficiently covered it, by a proposal, that, for the purpose of exhaustion, in a series of divisions, carried on in this dichotomous mode, to one of the two members an *et cætera* should in each instance be substituted.

Here then, according to this pair of Logicians, the Latin phrase *et cætera*, in English, *and the rest*, might, on every occasion, and with equal advantage, be substituted to the name of either, or at least to that of one, of the branches in each joint of a system of logical divisions, framed and denominated in the exhaustively bifurcate mode. But is this so? No: not on any occasion, with any such advantage. Why not? *Answer*. Because, by an &c., substitute it to which of the two names you will, though you may make your division *equally exhaustive*, you can neither *make sure* of making it *equally distinct*, nor *can* you (see § 12.) render it equally *instructive*.

In the name, which, upon the *Ramean* plan, you give to each branch, viz. the *two-worded* name, be it *positive*, be it even *negative*, you bring to view *two properties*: one, in respect of which the individuals contained in both branches *agree* with one another; another in respect of which they *differ* from one another: those of the one *having* this latter property, those of the other *not*. But an *et cætera*?—what are the properties of an *et cætera*?

Let it not be said, that the name, the two-worded name, of a *negative* branch, shows no property. For, in the first place, it shows that property, which the individuals belonging to *that* branch possess in common with those that belong to *the other*: in the next place, it shows *another* property: for, to the purpose of instruction, concerning the nature of the object, even the *non-possession* of this or that property, is itself a property.

Under the assurance afforded by the bifurcate mode, when it is declaredly exhaustive, viz. the assurance, that, at each *joint*, in the composition of the two-worded name of either of the two branches, if the sign of negation is not actually employed, it may, without impropriety, be so employed at pleasure, under this assurance, so it is that they may either, or both of them, be employed as trunks, and, in that character, may be subjected to ulterior division. And in this way accordingly it is, that, in several instances, in the annexed sample of an Encyclopædical tree, both branches may be seen employed.—But an *&c.*?—the phrase *et cætera*?—in what way could these Logicians have made it serve in the character of *a trunk*? In what way could they have divided it into *branches*?

Of what one sort of aggregate is *et cætera* the name? Yet, according to them, with as much propriety as any given number of other names, an *et cætera*, if repeated that same number of times, is capable of giving denomination to all sorts of aggregates.

By the *contradictory formula*, which, in every ramification, if performed in the Ramean mode, is, as above, either expressed or implied,—an assurance is given, that the mode of division pursued is meant to be *exhaustive*, and to that end is rendered *bifurcate*. But if, in the instance of either branch, in the room

* From the fifth of these his rules substantial and useful instruction will, however, be found obtainable:—"Divide," says he, "every subject, according to the special design you have in view." Then immediately follows an observation, which, with perfect propriety, might have been made to constitute a distinct rule. "One and the same idea or subject," says he, "may be divided in very different manners, according to the purposes we have in discoursing of it;" whereupon, by way of exemplification, he adduces the several purposes, which, in regard to a book, it may naturally happen to the *Printer*, the *Grammarian*, and the *Logician*, to have in view.—Of this rule of his, two exemplifications may have been observed in the Encyclopedical Table here exhibited.

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of a significant name the insignificant name *et cætera* is employed,—in this way, what assurance is given that the mode employed will be bifurcate? True it is, that, in the case supposed by *Reid* and *Kaimes*, the mode (it seems to be taken for granted) *is* the *bifurcate* mode. But in the nature of their *et cætera*, there is nothing to hinder its being employed when the mode is *multifurcate:* whereas, as hath been seen, it is the property and excellence of the *contradictory formula*, that it cannot be employed but that the mode of division is, at the same time, *bifurcate* and *exhaustive*.

More misconception—more confusion. Of the confusion made by Watts, for want of his being sufficiently aware, that what belonged to the subject was, not a physical and real whole, but a logical and fictitious aggregate, notice has been taken in § 12. Exactly into that same inadvertence may Reid and Lord Kaimes be seen to have fallen in this place. "*Division of England into Middlesex and what is not Middlesex:*"* this is what they give as an example of the only sort of division here in question, viz. a *logical* one. But, agreeing in this respect with the vegetable body called *a tree*, the portion of the earth's surface, called *England*, is a physical and real whole, not a logical and fictitious aggregate.

In a logical division, performed in the exhaustively bifurcate mode, the two-worded name of each branch gives intimation of two properties belonging to all the individuals contained in it: one, in the possession of which they *agree;* another, by the *possession* and *non-possession* of which they are *distinguished*. But, of no one property,—whether as possessed, either by all "*England,*" or by itself, or by anything that "*is not*" itself,—does the word "*Middlesex*" give any intimation. "*It is evident*" (say they) "that *these two members comprehend all England.*" True. "*In the same manner*" (say they) "*we may divide what is not Middlesex into Kent, and what is not Kent.*" True again. "*Thus,*" (continue they) "*one may go on by divisions and sub-divisions* that *are absolutely complete.*" True, once more: but while, for your subject, instead of a logical aggregate, you take a physical whole, although those divisions will indeed be as trifling and useless as to yourselves they appear to be, being so, will they prove what you bring them to prove? Not they indeed. Why? Because they are nothing to the purpose. "This example" (they go on to say) "may serve to give an idea of the spirit of Ramean division." How far this purpose is really served by it, the reader may now judge.

A curious circumstance is, that it is in the character of a source of objection to this mode, that his lordship brings to view the train of false "*conclusions*" that, in relation to this subject, "*philosophers*, ancient and modern," have, according to him, in great abundance, fallen into: fallen into, and from what cause? From the having made use of this security against error? No: but from their having (says he) omitted to make use of it. To the "*divisions*" of their making, the fault he ascribes, is that of being "*incomplete.*" Of the mode of division, which he is thus holding up to ridicule, the distinctive character is, that it is capable not only of being *rendered*, but, wherever it is so, *proved* to be complete. Yet the mode is (according to him) a bad one. Why?—but because *by* pursuing it?—no: because, *for want* of having pursued it,—certain persons have made bad work.

So much for the objection, which, by this pair of Scottish philosophers, we have seen made to the scheme of logical division, which, in that age of comparative darkness, was invented, as it should seem, by the ingenious French Logician, *Pierre Ramée*.

As to any of those applications which by him (as we are told) were made of it, that at *this* time of day, unless it be from seeing how the instrument itself was managed by him, any useful instruction should be derivable, there seems no great reason to expect. *Observation* and *experiment*,—in these, as above observed, (§ 12.) may be seen the only sources of all real knowledge. In the days of *Peter Ramus*, anterior as they were to those of our Lord Bacon, scarcely, unless it were here and there by accident, had these funds been, either of them, so much as begun to be drawn upon. Of *Logic* with its divisions, all that it is in the power to do is, to arrange and display in the most instructive manner whatsoever matters have been extracted from those sources. What it can do is, to *methodise;* and in that unimmediate way *promote creation:*—what it can *not* do is, *to create*.

Section XVII.

Process of exhaustive bifurcation, to what length may and shall it be carried?

In the division of a logical aggregate, *exhaustiveness* can never fail to be useful and instructive: to afford assurance and demonstration of its existence, bifurcation can never fail to be necessary. By this time these propositions may, it is hoped, be assumed as truth. There remain however still, on every occasion, two questions: viz. how far this useful process can be, and how far it ought to be carried on.

By these questions the answers are suggested. Two bars present themselves, by either of which, where it has place, the employment of these instruments may be effectually opposed. One is *impracticability*, the impracticability of the operation: the other may perhaps be termed the *uneconomicalness* of it: being that which has place, where, whatsoever may be the value of the benefit, the value of *labour* necessarily attached to it

* Kaimes's Sketches, book iii. Sk. i. p. 163.

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—labour of creation, communication and receipt included—would be still greater.

I. As to *impracticability*. Of impracticability, in this case two causes present themselves as capable of having place: viz. *uncognoscibility* and *unexpressibility*.

1. As to *uncognoscibility*. It is only in so far as the properties, of the aggregates or classes of things in question, are known, that, for the purpose in question, or any other, any one such aggregate, with its branches, can thus be exhibited: this or that property being stated as having place in all the individuals contained in one of the two branches, and as *not* having place in any of those contained in the other. Take, for example, *Natural History*, and therein *Botany*. Forty thousand was, some years ago, stated as the number of supposed different *species* of plants (exclusive of *varieties*) at that time more or less known to the botanic world. But, at that time, the utmost knowledge obtained of them by any person was not, to any such degree clear, correct, and complete, as to enable him, in this way, to show, of every one of them, in any such concise mode, its points of agreement and disagreement with reference to every other. And even if, in and for any one year, the distinctive properties of the whole multitude of individuals contained in the whole multitude of species then known, could have been exhibited in this systematic form, the sketch given of them, if with regard to the whole number of species of plants then existing it professed to be, and even if it really were, an exhaustive one, would, in and for the next year, no longer possess that quality.

2. The quantity of *surface* necessary to the exhibition of such a diagram, presents another circumstance, by which, long enough before the number of the extreme branches had reached to any such number as forty thousand, as above, not to say the tenth or the hundredth part of it, the bar of *impracticability* would be opposed. Number of the extreme branches being 40,000; and this number, being the last term of a series of multiplications in which *two* is the *common multiplier*, what would be the sum required of the number of the intermediate branches, which being to be interpolated between the first term, viz. 1, and the last, viz. 40,000, would be to be added to the sum of those two numbers? To this question the answer is left to be found by any ready arithmetician, in whose eyes the profit would pay for the trouble.*

II. As to *uneconomicalness*. To perform the comparatively small number of ramifications exhibited by the annexed sample, was found to have imposed so heavy a labour, that over and over again, the thought of having undertaken it has been matter of regret. In comparison of the labour necessary to the execution of such a work, the mere labour of perusing it is obviously nothing. Yet even with this comparatively slight burthen, it is only in the instance of a very small proportion of the whole number of those by whom this volume may happen to be opened, that any expectation of their charging themselves with it can reasonably be entertained.

To those who have inclination and leisure, an assurance is here ventured to be afforded, that whatsoever may be the information derivable from the perusal of a work of this sort, to whatsoever subject applied, much greater will be the profit derivable in that same shape from the execution of it.

As to the length to which the operation shall be pursued, each individual will in both instances be determined by his own feelings in regard to net profit and convenience. But in one thing all persons, it is supposed, will be agreed, viz. that of the whole number of ramifications, which in this way it might be possible to exhibit, it will in most instances be no more than a part and that in most instances a small part, of the whole field, that will be found to afford adequate payment for the trouble.

On the other hand, the more extensive the *universal trunk*, the more extensive will be the quantity of information which, in and by each such ramification, will have been obtained and communicated; the more extensive the field, the greater will be the profit derivable from this mode of cultivation.

In the fields of *Noology* and *Ethics* it is, in contradistinction to that of *Somatology* (including Natural History and Natural Philosophy), that the nature of the field will, it is believed, be found to afford the greatest profit. Why? Because, for example, in Natural History, the knowledge of the utmost number of peculiar properties that could in this way be brought to view, would be but inconsiderable, in comparison with the number of such properties as are seen really to have place; and for which, though in each instance they might be exhibited, as they are actually exhibited in a simple list,—no place could be found in any such Table.

The objects, of which the words that belong to Noology and Ethics are the names, are chiefly the works of man, the products of his mind. In multitude and variety the works produced by this instrument are as nothing in comparison with those produced by the hand of Nature.†

* No, (says he,) the conditions are inconsistent. —First term 1; Common multiplier, 2; No number of terms will give 40,000 for the last: the two nearest will give—the one a less number, the other a greater. Hence a demand for discussions, the profit of which would not pay for the place occupied.

† In various parts of the field of art and science, in his own instance, towards giving clearness, correctness, and completeness to his own views, the writer of these pages has found it—so at least it has seemed to him—of the greatest use. For this

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Section XVIII.

How to plant a Ramean Encyclopædical tree, on any given part of the field of art and science.

Having, during a long course of years, and on a great variety of occasions, if his conceptions on this subject are not altogether illusory, derived much advantage from the use of the Ramean tree, the author is unwilling to quit this part of the field altogether, without having first thrown out a few hints, which have occurred to him, as capable of affording more or less assistance, to any other person,* who, on any occasion, may feel inclined to make trial of the old logical instrument, thus newly offered to notice.

1. As far as they go, employ such materials as you find ready provided to your hands. These materials are such words as, in relation to the subject in question, are to be found already existing in the language: the *words*, and thereby the *relations*, in the designation of which they are respectively employed. Set them down together, one after another, for example in columns, as many as in the first instance you can think of or find, adding from time to time others as they occur.

2. When you have got enough of them to begin upon, whatsoever be the field of which you were then endeavouring to take a survey, among the words the import of which is contained within the limits of it, look out for the one of which the import presents itself as most extensive. See whether it exactly covers the whole extent of the proposed field of your survey. If yes, employ it for your universal trunk; if not, you must frame some word which, by its import, shall, after what explanation may be found necessary, present to view, in the most effectual manner, the whole contents of that same field.

3. The universal *trunk* being thus found or made, for the first pair of *branches* look out for the two words, the imports of which present themselves as being both of them contained in the trunk, and at the same time the most extensive of all those that are; applying to them the test herein described, observe whether within their imports, taken together, the whole matter of the trunk be comprehended: if yes, there is your first pair of *minor aggregates* given, your first *ramification* made.

4. If no two such words can be found, then take the one the import of which—it being, (as it naturally will be,) the name of a *positive* property—appears, next to that of the above-mentioned trunk, the most extensive. Taking this for the name of one of your two minor aggregates, branches of the first ramification, the sign of *negation* added to it gives you the other.

5. The test always in hand or mind, proceed in the same way, carrying on your series of ramification as far as you find convenient: at every joint, for your two branches looking out for a pair of names, both of them in common use: taking up with only one such name, and for the corresponding name adding to it its *contradictory*, in those cases alone in which no such already existing pair of *trivial*, but at the same time all-comprehensive names are to be found.

6. For each such branch, if you see occasion, in addition to such its *two-worded* name, framed as last-mentioned, find or frame a *single-worded* name †† which will thus stand as a *synonym* to the just-mentioned Encyclopædical two-worded name, and will for ordinary use be a commodious substitute.

7. If, under any trunk, whether by *finding* them or by framing them, you provide yourself, in the first instance, with a pair of single-worded names, then, for purely Encyclopædical synonyms, you will have to frame for each a *two-worded* synonym: if, in the first instance, the pair of two-worded Encyclopædical names are those with which you provide yourself, then, for Encyclopædical use, or trivial use, or both, what you will have to do is, as above, to find or frame, as the case may be, one or two *single-worded* synonyms.‡

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purpose he had even brought together a few exemplifications. But, seeing to what a length they had led him from the main purpose, and considering that where, by any person by whom, after such particular discussion and explanation, the reality of the benefit is not recognised in that part of the field which has here been operated upon, still less reasonable would be the expectation of seeing it recognised on any other ground, of which no more than the slightest and most general view could be presented, he struck them out.

Without any such trouble as that of exhibiting them in this particular view, other exemplifications may, however, perhaps, be seen to be afforded by some of the subsequent Numbers of this Appendix.

* The reader will probably find a convenience in having open before him the diagram of this *Encyclopædical Tree*, and occasionally to turn to the *Explanations* given, in relation to it in § 9.

† Of a word thus framed, an exemplification may be seen in the *Encyclopædical Tree*, in the word *Eudæmonics*.

‡ An instance, in which the pair of names first provided were *single-worded* names, and these *trivial* names, is afforded by the words *Geometry* and *Arithmetic*:—an instance, in which the names first provided were indeed *single-worded* names, but those *not trivial* names, but names framed for the purpose, are *Posology* and *Poiology*. From *thence*, by the addition of the name of the *trunk*, were made,—as may be seen both in the diagram and the explanation of it,—the two two-worded Encyclopædical names, *Pososcopic Somatics* and *Poioscopic Somatics*.

To either of these two Encyclopædical two-worded names, in the structure of which the *contradictory formula* is not expressed but only implied, had it been deemed necessary to substitute two names, in which that *test of all-comprehensiveness* is expressed, the following is the mode in which it might have been effected:—*Pososcopic* being continued, to *poioscopic alegoposic* might have been substituted. In this case, the existence of all-comprehensiveness would have been effected,

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8. On proceeding in this track, what will be very apt to happen to you is, the finding that, after you have thus found places in your system for a certain stock of appellatives, growing always in number greater and greater, but in point of import each of them less and less extensive as you advance, a number of appellatives, more or less considerable, the imports of which are more extensive than those of some to which you have given admittance, have been left behind. These imports, however, being, by the supposition, included, every one of them, within the limits of the field which you are thus surveying, will not present to you any new difficulty. By the imports of *these* words, as well as by those of the others, will the field be divisible: only, for the making of your divisions, you must look out for some one or more other *sources*.*

9. In these cases, as in those first mentioned, these sources will be furnished by so many *distinctive properties*: which accordingly you must be on the look out for, and for each of which, if it have not a name already, you must make one.

10. Having found or made names for all these several sources of division, set them down one after another in one list; which done, for exhibiting the relation which the objects so denominated bear to one another, you will probably find some means of comprising, in one and the same system of divisions, the whole list of those *sources of division*, in the same manner as you have comprised in one such system the results of the several divisions from the first of all these several sources.†

11. On looking over the stock of words, belonging to this your field, you will probably find, in a number more or less considerable, pairs or parcels of words, which with relation to one another are *synonymous*. These, as they occur, you will pick up, and, in that character, note them, and set them down. Examples of words thus related may also be seen in the *Table*.

12. Whatsoever they may be in other respects, it was impossible these directions should be made anything like complete for use, without some intimation given of the distinction between names of *real entities* and names of *fictitious entities*; a distinction which, in some of his Encyclopædical remarks, D'Alembert was, it is believed, the first to bring to view, and which will be found to pervade the whole mass of every language upon earth, actual or possible. Names of *bodies*, for example, are names of *real entities*;‡ names of qualities and relations, names of fictitious entities. The names, by which the branches of the *Porphyrian* or *Rameau* tree are designated, are names of *real* entities.§ The names of the branches of the Encyclopædical tree *here* submitted to view, are names of *fictitious* entities; though to a considerable extent included in them, as will be seen, are references made to correspondent names of real entities.

Names of real, names of fictitious entities, in the division thus expressed, may be seen one exhaustive division of the whole stock of *nouns substantive*. Strict, to the highest pitch of strictness, as is the propriety with which the *entities* here called *fictitious* are thus denominated, in no instance can the idea of *fiction* be freer from all tincture of blame: in no other instance can it ever be equally beneficial; since, but for such fiction, the language of *man* could not have risen above the language of *brutes*.

The above seemed as little as could be said, to prevent the whole field of fictitious entities from presenting itself to the eye of the mind in the repulsive character of an absolutely

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and that (it is supposed) with truth. But that *instruction* would not, upon the face of the ramification, have been stamped, which, by exhibiting *Posology* and *Poiology* together, in the character of two branches, comprehending between them the whole contents of the trunk *Somatology*, seems to be afforded.[a]

* Take an apple. Cut it once through with a knife: by cutting it in this one direction, you divide it into two parts. Put the parts together again, you may in like manner cut it again into two other parts. If those produced by the former division are considered as united, you have still but two parts: if not, you may have four parts. Correspondent to the different *dissections* taken by the instrument of division in the case of this *physical* whole, are the different *sources* of division in the case of the *logical* whole. In both cases the division is equally *bifurcate* and *exhaustive*.

† Of divisional operations, performed on the same subject, from divers sources, examples may be seen in the Table.

[a] Neither is *quantity* so perfectly out of the question in Natural History and Natural Philosophy, as *quality* is in Mathematics. Scarcely, therefore, could *Alegoposic Somatology* have been employed as the two-worded synonym of *Poiology*. Here there may be seen an instance of those imperfections which in such a case it seems impossible altogether to avoid.

‡ Even by *Bishop Berkeley*, by whom, as if to out-scepticize the sceptics, and foil them at their own weapons,—the existence of the table he was writing upon was denied,—the *name* of the table would have been allowed to be—in common intendment at least—the name of a *real entity*: and, even in his own view of the matter, the table (an utensil, which required wood to make it of, and a saw, &c. to make it with,) would have been allowed to approach somewhat nearer to the state of reality, than a sort of entity, such as a *quality*, as a *relation*, in the making of which *thoughts* have been the only *materials*, and *words* the only *instruments*.

§ Say, strictly speaking, names of so many aggregates or classes, of objects *in* which *real entities* are included: for, strictly speaking, *individual* objects are the only real entities: considered in themselves, the *aggregates* or *classes* in which those *real entities* are regarded as included, are no more than so many *fictitious bodies*, put together by the mind for its own use. See above, Note *, pp. 210-211, and below, § 19.

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dark spot. More cannot be said, without wandering still further from the main subject, and trespassing beyond hope of endurance upon the reader's patience.

The endeavour to trace out, throughout the whole of their extent, the principal relations between the field of *thought* and the field of *language*—comprising, of necessity, the leading principles of the art and science of *universal grammar*—have been the business of a distinct Essay, which it has been, and continues to be, the wish of the author to include within the limits of the present work. And in that work, in addition to the discoveries, half concealed or left unperfected, by *Horne Tooke*, the distinction, between names of *real* and names of *fictitious* entities, will constitute a capital and altogether indispensable instrument.* Almost all names, employed in speaking of the phenomena of the mind, are names of fictitious entities. In speaking of any *pneumatic* (or say *immaterial* or *spiritual*) object, no name has ever been employed, that had not first been employed as the name of some *material* (or say *corporeal*) one. Lamentable have been the confusion and darkness, produced by taking the names of *fictitious* for the names of *real* entities.

In this misconception may perhaps be found, the main, if not the only source, of the clouds, in which, notwithstanding all their rivalry, Plato and Aristotle concurred in wrapping up the whole field of *pneumatology*. In the phantoms generated in their own brains, it seemed to them and their followers that they beheld so many realities.

Of these fictitious entities, many will be found, of which, they being, each of them, a *genus generalissimum*, the names are consequently incapable of receiving what is commonly understood by a *definition*, viz. a definition *per genus et differentiam*. But, from their not being susceptible of *this* species of exposition, they do not the less stand in need of *that* species of exposition, of which they are susceptible.†

By any person,—should there be any such person to whom the ideas thus hazarded, present themselves as having a substantial footing, in the nature of *things* on the one hand, and the nature of *language* on the other,—it will probably be admitted, that a demand exists for an entirely new system of *Logic*, in which shall be comprehended a *theory of language*, considered in the most general point of view. For the construction of such an edifice, a considerable proportion of the *materials* employed in the construction of the *Aristotelian* system of logic, would be indispensably necessary. But in this very supposition is included the necessity of *taking to pieces* the whole mass of that most elaborate, and, considering its date, justly admired and venerated monument of human industry and genius.

As to *Plato*, when in the vast wilderness of words with which, by this spoilt child of Socrates, so many shelves and so many brains have been loaded, and in which so many wits, beginning with those of Cicero, have been lost, when among all these *signs*, so much as a single thought, which is at once clear and instructive, shall have been pointed out, it will be time enough to steal from the examination of Aristotle's Logic, either a word or so much as a thought, to bestow upon his master's eloquence.

With some modifications, which reflection will suggest, and which it would take up too much time and room here to endeavour to particularize, the method herein above proposed, as applicable to *names of* objects, to those elementary parts of *propositions*, which by logicians are distinguished by the name of *terms*, would be found applicable to *propositions* themselves: to those propositions, for example, by which, under some such name as *Contents*, intimation is given, in general expression, of the matter contained in any literary work, and more particularly in any work of the *institutional* kind: and thus it is, that to the view taken of any such portion of the field of art and science, may be given, in the promptest and most commodious manner, any degree of extent of which the existing state of the materials, collected by observation and experiment, has rendered it susceptible: and in truth, *terms* being the matter of which *propositions* are principally composed, by any arrangement given to those principal ingredients, an arrangement is already in some sort given to the whole matter of all the several propositions, into the composition of which those elementary articles are capable of being made to enter.

In the explanation above given of the manner in which, out of such terms as, in any given part of the field, the existing state of the language furnishes, a system of exhaustively bifurcate division may be formed—it has been seen how it is that, in a number of places more or less considerable, for want of such names, already in use, gaps will be left in the work: gaps, for the filling up of which instructions are thereupon given.

By the powers of the imagination, working with *analogy* for its instrument as well as its guide, *words*, especially where, in some orderly manner, spread out, a number of them, together on one and the same surface, before

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* See the several works on "Grammar," "Language," and "Ontology," in this volume.—*Ed.*

† Examples of these *undefinable* fictitious entities are—

I. Physical fictitious entities—*motion*, *rest*, *quality*, &c.

II. Ethical fictitious entities—*obligation*, *right*, *power*, &c.

III. Ontological fictitious entities—*condition*, *certainty*, *impossibility*, &c.

Of the demand for a *species* or *mode* of *exposition*, adapted to the nature of this class of appellatives, hints may be seen in an anonymous tract published by the author, A° 1776, under the title of "*Fragment on Government*," &c., p. 179 to 185. It has this long time been out of print.—[See this collection, vol. i. p. 283, *et seq.*]

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the eye, will bring to view, each of them, not only the particular object, which in common discourse it is employed to designate, but an indeterminate multitude of other objects which, by means of some *relation* or other, stand, each of them, in some way or other associated with it. In this way it is, that by means of some indication, afforded by the import of this or that article belonging to the existing stock of names, the filling up of a gap of the sort just described will be effected: and by every gap thus filled up, precision at least, and frequently *extension*, will, if the operation be properly performed, be given to the conception entertained of the contents of that part of the field: and thus may be seen, according to the nature of the branch of art and science which is in hand, one way at least in which *inventions* may be, and doubtless have been brought to light, and *discoveries* made. *Quodlibet cum quolibet*, is a motto that may serve for every discovering, and every inventing mind.

Section XIX.

Logical Mode of Division—its Origin explained and illustrated.

For facilitating the execution of a work of the sort here in question, viz. a system of logical division in the exhaustively bifurcate mode—a few instructions, such as they have been seen, have just been hazarded. The topic was upon the point of being closed, when, by a dip taken into Condillac's little work on *Logic*, an addition was suggested, which now seemed indispensable. The only sort of *analysis*, which in the present work hath as yet been in question, is of that sort, of which not so much as the conception could have presented itself, but in a considerably matured state of the human mind. But in that little work of Condillac, under the same name *analysis*, was observed to be brought to view a sort of logical operation, to which that appellation could not, it seemed, with propriety, be refused, but of which it was at the same time evident, that it could not but have been in use in the very earliest stage of human existence: a stage so early, that although the operation must, in its extension, have kept pace with that of language, yet in part the existence of it must have been anterior even to that of the earliest formed raw materials, of which language was gradually composed: since those materials are not, any of them, anything but signs of ideas, and it is only by the sort of analysis now in question—viz. the *primæval logical analysis*, performed by the mind upon individual objects in the character of physical wholes, that those ideas were supplied.

Of every *logical analysis*—of every system of logical divisions—the subject is a *logical whole*. But, any such logical analysis, nowhere could it ever have had a subject, but for that system of *primæval* logical analysis, which has had for its subjects *physical wholes*, and for its *results* those ideas, which at the very moment of their conception, were respectively accompanied and fixed by so many *names* or *denominations*:—signs, by means of which, in so far as those signs were the sort of names called *common* names, those ideas were as it were tied up into bundles, called *sorts, kinds, species, genera, classes*, and the like: the connexion being effected by another sort of logical instrument, which, as will be seen, is not *analysis*, but its converse, *synthesis*.

Of this double course—a course of *analysis*, conjoined with a correspondent course of *synthesis*—the commencement must have had place in the very infancy of society; and neither to the continuance nor to the extension of it can any conceivable bounds be assigned, other than those which apply to the extension and continuance of society itself.

1. Difference between a *physical whole* and a *logical whole*; 2. difference between *physical analysis* and *logical analysis*, when both have for their subject a *physical whole*; 3. difference between logical *analysis* and logical *synthesis*; 4. operation and instrument by which *logical synthesis* is performed; 5. necessity of an antecedent logical *analysis*, performed upon a physical whole, to the previous *formation*, and thence to the subsequent *analysis* of a *logical whole*; 6. necessity of an act of logical *synthesis* to the formation of such logical whole: such are the points, on all which, as soon as the definitions of the two species of *wholes* have been given, a conjunct illustration will be attempted.

By a *physical whole*, understand any *corporeal real entity*, considered as being in one mass, and without any regard paid at the instant to any parts that might be observable in it: for instance, this or that individual *plant*.

By a *logical whole*, understand that sort of fictitious *aggregate*, or *collection* of objects, for the designation of which any one of those names which, in contradistinction to *proper* names are termed *common* names, are employed; for example, the aggregate designated by that same word *plant*. The common name *plant* is applicable to every individual plant that grows; and not only to those, but moreover to all those which ever grew in time past, and to all those which will grow in time future; and in saying, of any one of them individually taken—viz. of those that are now growing, *this plant exists*, there is no fiction. But the *aggregate*, conceived as composed of all plants, present, past, and future put together, is manifestly the work of the *imagination*—a pure fiction. The *logical whole*, designated by the word *plant*, is therefore a *fictitious* entity.

For the illustration of these several points, follows now a short history, which though at no time perhaps realized in every minute particular, must many millions of times have been exemplified in every circumstance, which, to the purpose of the present explanation, is a *material* one.

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Walking one day over his grounds, a certain husbandman observed a plant, which was not of the number of those which he was employed in cultivating. Overhanging some of them, it seemed to him to impede their growth. Taking out his knife, he cut the plant off just above the root; and a fire, in which he was burning weeds for the ashes, being near at hand, he threw it into the fire. In so doing, he had thus in two different modes performed, upon this physical *whole*, the physical *analysis*. By being cut as it was, it became divided into two parts, viz. the *root*, and that which was above the root: and thus in the *mechanical* mode was the physical analysis performed upon it. By its being thrown into the fire and there consumed, of the portion so cut off as above, part was made to fly off in the state of *gas*, the rest staid behind in the state of *ashes*: and thus in the *chemical* mode was the physical analysis performed upon it.

Not long after, came a daughter of his that same way, and a plant of the same kind which her father had thus cut down being left standing, her *attention* was caught by the beauty of it. It was a sweet-brier rose, of which one flower had just expanded itself. All parts of the plant were not alike beautiful. By one part her attention was more forcibly engaged than by the rest. It was the flower. To examine it more closely, she plucked it off, and brought it near her eye. During its approach, the scent of it became perceptible; and thus another sense received its gratification. To prolong it, she tried to stick the flower in a part of her dress that covered her bosom. Meeting with some resistance, the stalk to which, with a few leaves on it, the flower was attached, was somewhat bruised; and now she perceived and distinguished another odour, which though not less agreeable, was somewhat different from the first.

All this while she had been performing upon this physical whole the logical operation termed *logical analysis*: performing it not the less, though, as in *Moliere's Bourgeois Gentilhomme* Monsieur Jourdan when talking *prose*, without knowing it. The *instrument*, by which this mental *operation* was performed by her, was the fictitious entity *attention*. By the attention which she bestowed upon the flower, while no equal degree of attention was bestowed upon any other part of the plant, she analyzed it—she mentally *resolved* or divided it—into *two* parts, viz. the *flower*, and all that was not the flower: and thus she distinguished part from part.

Again. By applying her attention, first to the *beauty* of the flower, composed as it was of the beauty of its *form* and the beauty of its *colour*, she performed in this same original subject *another* analysis, which though still a *logical* analysis, was productive of results somewhat different from those produced by the former; for thus, in the same *part* she distinguished two *properties* or *qualities*; viz. that of presenting to the sense of *sight* a peculiarly agreeable *appearance*, and that of presenting to the sense of *smell* a peculiarly agreeable *odour*. The *parts* were both of them *real* entities: the *qualities* were, both of them, *fictitious* entities.

Eager to communicate the discovery to a little brother of her's, she took him to the spot: she showed him the *plant* from which the flower had been plucked. The flower had already become a subject of conversation to them: that part had already received the name of *flower*: not having equally engaged her attention, the other part, like a sheep in a flock, or a pig in a litter, remained without any distinctive name.

Ere long her sweet-brier rose put forth two other blossoms; being so little different from the first, each of these became *flower* likewise. From a *proper* name, *flower* thus became a *common* name.

In the course of another social ramble, a *mallow* plant, with a flower on it, met her eye. At a distance the flower was not yet distinguished from that of the *sweet-brier rose*—"*Ah*," (cried she,) "*here is* flower *again*." The *sweet-brier*, on account of its scent, which continued after the flower was gone, had been preserved: the *mallow*, having nothing but colour to recommend it, was neglected.

These rambles had not continued long, before other sweet-briers and other mallows met her eye. The former being regarded with interest, the other with comparative indifference, the occasion for distinguishing them in conversation was not unfrequently recurring. The *rose flower* became a *rose flower*, the *mallow flower* a *mallow flower*.

When the flower first observed was named *flower*, as yet nothing but *analysis—logical* analysis—had been performed: no operation of the nature of logical *synthesis*: of one individual object it was and no other, that the word *flower* had been made the name. But, no sooner was the *second* flower observed, and the same name *flower*, which had been applied to the first, applied to this other, than an act of logical *synthesis* was performed. The *proper* name was thus turned into a *common* one; and the fictitious entity, called a *sort*, a *kind*, a *species*, or a *genus*, (call it which you please) was created.*

The *fictitious* entity being nothing at all, and the two *real* entities being each of them something, the *fictitious* entity itself did not contain within itself the two *real* entities, or either of them. But the name, which, after having occasionally been applied to each of

* *Genus* and *species* are words which cannot, either of them, be employed without impliedly asserting the existence of the other. Both are aggregates, or names of aggregates: *genus* is the whole, of which *species* is a part. Suppose but one aggregate, either of these names may as well be applied to it as the other; or rather, and for the above reason, neither can with propriety be applied to it.

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the two *real* entities, became, by degrees, designative of the *fictitious* entity deduced from them, as above, by abstraction, continued to be employed for the designation of *either* of them, and occasionally for the designation of *both* of them together: and thus, in a sense, which, although not strictly proper, has the advantage of conciseness, the one *fictitious* entity, the *species*, may be said to have contained, and to contain, the two individual *real* ones: to *contain*, viz. though not in a *physical*, in a *logical* sense.*

The analysis thus unconsciously performed by the maiden on the first-observed sweetbrier rose, viz. by applying her attention to one part, while it was not applied to the other, had for its subject the *real* entity, the physical whole. It may be termed, the *primæval* or *primordial* analysis: for by no other sort of logical analysis will it be found capable of having been preceded. The analysis, by which the rose-flower became *rose-flower*, and the mallow-flower, *mallow-flower*, had for its subject no other than the *fictitious* entity, the *logical* whole, viz. the *whole* designated, fixed, and, as it were, created, by the denomination *flower*, so soon as, after having been employed merely as a *proper* name, it had come to be employed as a *common*, and thence as a *specific* or *generic* name. It may be termed the *secondary* analysis, or analysis *of the 2d order*. In her young mind, and in this its simple form, this secondary mode of analysis had nothing in it of science, nothing of system. But, in it may be seen the germ of all those systems of division, which, being framed by scientific hands, have spread so much useful light over every portion of the field of art and science.

The maiden had for her sweetheart a young man, who, though not a member of the Com-

* Thus it is, that, considered as distinct from the individuals contained in them, these aggregates, as above, are but *fictitious entities*:—the *names*, employed in the designation of them, so many *names of fictitious entities*. But, when compared with names of fictitious entities at large, these may be seen to have something peculiar in them, which, if he would avoid confusion and disputation, it seems necessary a man should have in mind. In this case, the same word which is employed to signify the *fictitious entity*, viz. the *fictitious aggregate*, is also employed to designate any one of the *individual real entities*, of which that aggregate is regarded as being composed: an homonymy, which may be seen not to have place in the instance of any other sort of fictitious entity, such as a *quality*, a *property*, a *relation*, and the like. Nor let it be said, that, because it contains real entities, the aggregate, called a *species*, a *genus*, a *class*, is itself a real entity. For by the word *plant*, taking *plant*, for example, for the aggregate, are designated—not only all plants existing at the time of the speaking, or the writing of that word, but also all plants that ever have existed,—and all plants that ever shall exist in future,—and even all plants that, without existing, shall be but conceived to exist: and to these last, at any rate, the term *real entity* will hardly be regarded as properly applicable. But though, in addition to the several individual objects, to which the word *plant* is applicable, no real entity, corresponding to it, has place *out* of the human mind,—yet, *within* that receptacle, by this same *name* of a *fictitious* entity, a *real entity*—a *general idea*,—an entity, which though not *corporeal*, is not less *real* than that which is produced in it by the sight or touch of an individual plant,—is produced. To convince himself of this, the reader need but ask himself—whether, after, and by thus reading the word *plant*, his mind is not put in a state more or less different from that which it was in, before this word was read by him. If this be not enough, then let him say, for example, whether by the proposition, *plants have a property which minerals have not*, three distinguishable mental sensations at least—not to speak of any others—have not been produced in his mind: three perfectly distinct *ideas*, each of which is of that sort which is termed a *general* or *abstract* one. Yet, to some philosophers, it has, somehow or other, been matter of supposed discovery, that there are no such things as general or abstract ideas: not considering that, if this position of theirs were true, nothing that they say in proof of it would have so much as the least chance of being productive of the effect they aim at: or, to speak still more generally, scarcely would anything they say be productive of any more effect than would be produced by so much nonsense. Yes:—by the word *plant*, or the word *plants*, when read, an effect, a sort of *feeling*, or *mental image*, is as really produced, as by the sight of any individual plant,—and it is a clearly different one. In the one case it is an *abstract idea*; in the other case, an *impression*: but in the one there is just as much reality as in the other. Of the evidence of the existence of the general idea, the probative force is even nearer, and more promptly and surely satisfactory, than that of the existence of any individual *plant*, from which, by abstraction, that general idea was deduced. In the former case, the evidence is *perception*: in the other case, it is but *inference—ratiocination*: and *that* such ratiocination, as many an acute mind (Bishop Berkeley's for instance) has not been satisfied with.

In speaking of *genera* and *species*, two sources of indistinctness and confusion, and (if observed) of perplexity, are continually presenting themselves. One is—the difficulty which, on the appearance of a generic or specific name, is found, in determining whether it is the fictitious entity—the aggregate *itself*,—or only the *name* employed for the designation of it—that, in the character of the subject of the proposition, the word is intended to bring to view. The other is—the penury and imperfection, under which language—the best constructed not excepted—still labours: viz. in respect of its furnishing no more than these two names, for the designation of the results of any number of ramifications, which, in a system of logical division, there may have been occasion to bring to view. Hence it is, that the same word, which, with reference to this or that other is a *generic* term, is *specific* with reference to a third. Hence again the continually recurring question—is this a *generic* or a *specific* name? and the dispute with what that question is pregnant, is altogether an interminable one.

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pany of Apothecaries, (for the company had not yet received its charter,) had, on his part, been engaged in a little train of observations, to an improved and extended series of which, together with the experiments which they suggested, some thousands of years afterwards that most useful and respectable community became indebted for its establishment.

He had observed his dog, after a full meal, betake itself to a grass-plat, and gnaw the grass: a sort of article which, when hungry, it had never been seen to meddle with. To this sagacious swain the maiden was not backward in reporting her above-mentioned discoveries. It might, perhaps, have been not altogether impossible to obtain a communication of some of those observations and discoveries of his, for the purpose of adding them to hers. But, for the explanation of what has here been endeavoured to be explained, what has already been reported of the damsel's will, it is hoped, be found to suffice, without any further trial of the reader's patience.*

Some thousands of years after appeared *Linnæus*. In the course of that interval, not

* In their present shape, the conceptions above brought to view would not have been formed, nor consequently would this section have been penned, but for a very recent glance cast on the *Logic* of *Condillac*. More than once, at different times, had that little work been glanced over, or at least glanced at: never without its presenting itself in the character of a mass of confusion, from which little or no information was to be reaped. *Analysis* is the name there given to the instrument, by which everything is there supposed to be done: everything by that *one* instrument; in every case that one instrument the same. Language-making was *analysing:* and "*analysis* itself was but a *well-made language.*" (Pp. 88, &c., 121, &c.) On looking at the work once more, observation was made of such passages, in which—always under this one name, *analysis*—an explanation is given of the mode, for the distinguishing of which the epithet *primæval* has herein-above been just employed. Now, for the first time, presented itself to view, matter which seemed capable of being put to use. A resolution was accordingly taken, to endeavour to derive such instruction as might be found derivable from it. Its claim to *attention* being now recognised, thus it was that, by a closer application of that faculty, those distinctions, which have above been seen, were brought to view. *Logical analysis* of the *physical whole*, *logical synthesis*, performed upon the *qualities*—upon the *parts* which had been produced by that logical *analysis*—these,—together with the *logical analysis* of those aggregates which were the products of that *logical synthesis*,—were, in the logic of Condillac, seen, all of them, designated by, and confounded together under, the one undiscriminating term *analysis*.—For the subject of the *primæval* analysis, Condillac, before he came to the *plant*, had employed a magnificently furnished *château:* for the present occasion, a couple of plants seemed quite sufficient, without any such encumbrance as the *château*. Moreover, of the sort of work here in question, abundance must have been done, before there were any such things as *châteaux*.

Yes, (says somebody;) and so there was before husbandmen's daughters amused themselves with gathering flowers. The ancestors of husbandmen were shepherds: the ancestors of shepherds, hunters. In certifying this genealogy *Geography* joins with History.

Assuredly (it may be answered) man had need to provide food, before maidens had need to gather flowers. But, to provide food, man must, somehow or other, have been in being, and able to provide it. Here then the explanation would have been entangled in the mysteries of *Cosmogony*—a subject, which, besides its inexplicability, is altogether foreign to the present purpose. No doubt that, for *attention*, and thence for *analysis*,—to be performed, as above, upon these *physical wholes*,—and thence for *synthesis*, and thence for *logical analysis*, to be performed upon the *logical wholes*, results of these *logical syntheses*,—demands much more urgent, as well as much more early, must have been produced by eatable *fruits* and *roots* than ever can have been produced by *flowers*. But, by any such illustration, we should have been sent to the Garden of *Eden:* and of that garden no map being to be had, sufficiently particular for the present purpose, there we should have lost ourselves.

Pluming himself, as it should seem, upon the discovery, and bringing it to view as such thrice in two small 12mo pages, *Condillac* (pp. 114, 115) will have it, that languages are but so many *analytic methods—methodes analytiques:* meaning, as far as he can be said to mean anything, the results of so many analytic—purely analytic—processes. He sees not, that, so far from being an analytic process, the process, by which the principal and fundamental materials of all languages—viz. *common* names—are framed, is of a nature exactly opposite to that of *analysis;* viz. *synthesis*. True it is, that this *synthetic* is necessarily preceded by an *analytic* process: viz. by the one above explained under the denomination of the *primæval* or *inerudite* analysis:—a *logical* analysis performed upon *physical wholes*. True it also is that, to the *wholes*, which are the results of this synthetic process,—with the exception of those *minimums*, which are in immediate contact with individuals,—another analytic process may, to any extent, be applied, viz. the scientific or *logical* analysis, performed upon these logical wholes. But, how promptly soever they may succeed to each other, *disaggregation* and *aggregation*—putting asunder and putting together—never can be one and the same operation—never can be other than opposite operations: and, but for and by means of the aggregative process, not a single word—not a single instrument—would the philosopher have had, wherewith to put together this his not sufficiently considered account of the formation of language.

One of these days—the sooner the better—by a still closer application of the faculty of *attention*, a more discerning eye will, perhaps, discover and bring to light similar imperfections in the account given of the matter in these pages: and thus it is, that,—by still closer and closer application of that same faculty,—additional *correctness*, *distinctness*, and *comprehensiveness*, is given to man's conceptions, in relation to each and every portion of the field of art and science.

Of the aggregations thus formed, some have been better made, others worse. Those which he regards as having been better made, were (he assures

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only in the language in which he wrote, but in every lettered language at least, not indeed with perfect steadiness, but still without much dispute or variation, a name corresponding to the word *plant* had been in use to be employed in the designation of any one of those physical objects, to which, when individually taken, that same denomination continues to be applied.

For the same length of time accordingly, a *logical whole*, possessing this vast extent—a *logical whole*, formed by the logical process called *synthesis*—had been in possession of the sort of existence which the nature of an object of this sort admits of.

For the purpose of distributing, according to such of these properties, as were at the same time most easily observable, most steady in their union, and most interesting to man, whether in the way of use or harm, such individual plants as from time to time should come under observation, and *this* to the end that such names might be given to them, whereby, for the purpose of putting to use their useful properties, or excluding the operation of their pernicious properties, they might, when seen, be recognised,—various sources of division had occurred to various scientific observers. By none of them had this useful object been completely accomplished. To *Linnæus* it appeared, that it was in the *flower* that the most apt source of division was to be found: inasmuch as, for the determination of the principal and most comprehensive divisions of a vast logical whole, certain differences, in respect of the form in which that part manifests itself, might be made to serve with as yet unknown advantage. Why? Because, with those differences in respect of the flower, other differences in respect of some of the properties most interesting to man—differences pervading the entire mass of each individual plant—had been observed to be conjoined. Thence, by seeing what sort of a thing the plant in question is, in respect of the flower, a guess may be formed, better than can be formed by any other means, what sort of a thing the plant is in other respects.

From this view a conception may be formed, of the disadvantage, under which every system of logical division comes to be framed. In this way no two things can be put asunder, but what have first been put together. To no other objects can this mode of *analysis* be applied other than to *logical wholes*—objects which are altogether the product of so many antecedent logical *syntheses*. But, in the first place, the *primæval logical analysis*, performed upon individual objects—this process, notwithstanding this its scientific name, having taken its commencement at the very earliest stage of society, cannot but have had for its operators the most unexperienced, the most

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us) the work of *Nature*: those which were worse made, the work of learned men: meaning such whose labours in this line he saw reason to disapprove of. *Nature* being a sort of goddess—and that a favourite one—by ascribing to this goddess whatsoever was regarded by him as good, he seems to have satisfied himself, that he had proved the goodness of it: and, by so concise an expedient—an expedient, in the employment of which he has found but too many successors, as well as cotemporaries and predecessors—he has saved himself no small quantity of trouble.

Nature is a sort of fictitious personage, without whose occasional assistance it is scarce possible (it must be confessed) either to write or speak. But, when brought upon the carpet, she should be brought on in her proper *costume*—nakedness: not bedizened with *attributes*—not clothed in *eulogistic*, any more than in *dyslogistic*, moral qualities. Making minerals, vegetables, and animals—this is her proper work; and it is quite enough for her: whenever you are bid to see her doing *man's* work, be sure it is not *Nature* that is doing it, but the *author*, or somebody or other whom he patronizes, and whom he has dressed up for the purpose in the goddess's robes.

One word more, on the subject of a former topic, before this philosopher is parted with.—In § 7, p. 74, may be seen the result of the provisional attempt towards an enumeration of the distinguishable *operations*, and correspondent *faculties*, of the mind. In number they were *seventeen*: *Condillac* (ch. 7. p. 61) makes but *six*: viz. 1. Attention. 2. Comparison. 3. Judgment. 4. Reflection. 5. Imagination. 6. Ratiocination. It might be an exercise for a student—nor would it surely be a useless one—to compare these six with those seventeen:—to observe, whether, in this longer list, there are any articles that do not properly belong to it:—and if not, whether *Condillac*'s shorter list be, in any particular, defective or not:—whether, for example, *memory* has not been *forgotten* by him:—and if not defective, in which of the articles of his shorter list those of the longer list are respectively comprised.

On considering the catalogue once more, it seems as if some such article as *analogization* or *analogoscopy*—i. e. *observation of analogies* might form a useful addition to it. Not but that, in the explanation thus given, the phrase, *observation of analogies* is already to be found. But,—so distinct from *simple abstraction*, *analysis*, and *comparison* are those abstractions, analysis and comparisons, which have *observation of analogies* for their result,—and so powerful and perhaps indispensable an instrument is the faculty so denominated in the hand of *Invention*,—that a separate denomination would, it should seem, be not ill bestowed upon it. Note, that to the above catalogue of the distinguishable operations and correspondent faculties of the human mind, the so-often-mentioned *test* of distinctness and all-comprehensiveness has not been applied. It is the result of no other operation than the analysis above distinguished, by the name of the *primæval* analysis: and (unless the title by which it is thus designated be regarded as the result of an act of *synthesis*) not subjected to any synthesis; nor consequently to any *scientific* analysis, as above distinguished.

Hence it cannot be given in any other character than that of a collection of raw materials, not so much as attempted to be made up into a finished work. The task was too heavy to be attempted in a parenthesis. But if, in the materials thus brought together, any addition should be found made to

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uninformed, and unskilful hands. In the next place, the *synthetic process*, by which the results of that analysis, fragments detached, by abstraction, from these physical wholes, were placed as it were under so many different common names, and by those names bound together by so many logical ties,—this likewise was a work, which, though not yet concluded, nor in a way to be soon concluded, must in its commencement have been coæval even with that of the *primæval* process, to which it has been indebted for all the materials on which it has had to operate: coæval with the very first crude effusions, of the results of which the matter of spoken, and thence of written language, came, by continual additions, to be composed.

Thus stands the matter, in regard to those names of aggregates, in the signification of which are comprised such individual objects as are purely corporeal. How then stands it (says somebody) in regard to objects of the *pneumatic* cast, *real* and *fictitious*? The answer is—to apply to this division of the objects of thought the triple process, just above described, would require a full and detailed explanation of the nature of those *fictitious* entities, which, by reason of the similarity of the aspect of their names to that of the names of corporeal objects, all which names are *real* entities, are so continually confounded with real ones. But to suggest the question is almost all that can be done here. To attempt anything like a complete answer, would be to transgress beyond endurance the proper limits of this work. A few words, for the purpose of affording an indication, how faint soever, of the only track, by the pursuit of which, a satisfactory answer would, it is supposed, be to be found, may be seen in the concluding note.*

Section XX.

Proposed new Names—in what cases desirable—in what likely to be employed?

Among the new names, here proposed for Encyclopedical purposes, are there any, of which it is *desirable* that they should come to

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those which had already been brought together by other hands, it will be not altogether without its use.

* According to that conception of the matter, which is here alluded to and assumed, entities are either *real* or *fictitious*: real, either *perceptible* or *inferential*: perceptible, either *impressions* or *ideas*: inferential, either *material*, i. e. *corporeal* or *immaterial*, i. e. *spiritual*. Material are those of which the principal divisions are exhibited in the *Rameau* tree: of such inferential real entities as are immaterial, examples may be seen in the Almighty Being, and in the human soul, considered in a state of separation from the body.

By *fictitious entities* are here meant, not any of those which will be presented by the name of *fabulous*, i. e. imaginary *persons*, such as *Heathen Gods*, *Genii*, and *Fairies*, but such as *quality*—*property*, (in the sense in which it is nearly synonymous to *quality*) *relation*, *power*, *obligation*, *duty*, *right*, and so forth. Incorrect as it would be, if the entities in question were considered as being, in point of reality, upon a footing with *real* entities, as above distinguished, the supposition of a sort of *verbal* reality, so to speak, as belonging to these fictitious entities, is a supposition, without which the matter of language could never have been formed, nor between man and man any converse carried on other than such as hath place between brute and brute.

Fictitious as they are, entities of this description could not be spoken of at all, if they were not spoken of as *real* ones. Thus a *quality* is spoken of as being *in* a thing or a person: i. e. the thing or the person is spoken of as being *a receptacle*, and the *quality* as being something that is contained *in* it.

As in the case of all words, which have an immaterial, as well as a material, the root of the *immaterial* will be found in the *material* import; so, to explain the nature and origin of the idea attached to the name of a *fictitious* entity, it will be necessary to point out the *relation*, which the import of that word bears to the import of one or more names of *real* entities: i. e. to show the *genealogy*, or (to borrow an expression from the mathematicians,) the *genesis* of the fictitious entity.

From the observation, by which, for example, the words *duties* and *rights* are here spoken of as names of fictitious entities, let it not for a moment so much as be supposed, that, in either instance, the reality of the object is meant to be denied, in any sense in which in ordinary language the reality of it is assumed. One question, however, may be ventured to be proposed for consideration, viz. whether, supposing no such sensations as *pleasure* or *pain*, *duties* would not be altogether without *force*, and *rights* altogether without *value*?

On this occasion, in the case of the name of a fictitious entity, a distinction requires to be made between the *root* of the *idea*, and the *root* of the *word* by which it is designated. Thus, in the case of *obligation*, if the above conception be correct, the root of the *idea* is in the ideas of pain and pleasure. But the root of the *word*, employed as a sign for the designation of that idea, is altogether different. It lies in a material image, employed as an *archetype* or *emblem*: viz. the image of a *cord*, or any other *tie* or *band*, (from the Latin *ligo*, to bind,) by which the object in question is *bound* or fastened to any other, the person in question bound to a certain course of practice.

Thus, for the explanation of a fictitious entity, or rather of the name of a fictitious entity, two perfectly distinct species of operations, call them *paraphrasis* and *archetypation*, will, in every case, require to be performed; and the corresponding sorts of propositions, which are their respective results, formed; viz. the *paraphrasis*, performing the function of *a definition*, but in its *form* not coinciding with any proposition to which that name is commonly attached.

The *paraphrasis* consists in taking the word that requires to be expounded—viz. the name of a *fictitious* entity—and, after making it up into a *phrase*, applying to it another phrase, which, being of the same import, shall have for its principal and characteristic word the name of the corresponding *real* entity. In a *definition*, a phrase is employed for the exposition of a single word: in a *paraphrasis*, a phrase is employed for the exposition of an entire phrase, of which the word, proposed to be ex-

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be employed for ordinary use? Among these again, are there any which present any *chance* of their being so employed?

In answer to both these questions, a very few words are all that can be afforded.

Geometry, Arithmetic, Algebra, Fluxions—for familiar use, what seems as far from being desirable as from being probable, is—that terms, of all which, though only one of them is exactly and originally expressive, the import is so well fixed, should be expelled by new ones.

To *Mathematics*, considered as a branch of art and science, in which all those others are included—to *Mathematics*, howsoever in its original import misexpressive, the same observation may be extended. Not but that *Posology*, should it ever be its lot to come into use,

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pounded, is made to constitute the principal or characteristic word.

Archetypation (a word employed, for shortness, rather than *archetypophantia*, i. e. indication of the archetype or pattern) consists in indicating the *material image*, of which the word, taken in its primæval sense, contains the expression.

Thus, without being drawn out into form, (an operation for which a multitude of distinctions and discussions would be found requisite,) in the case of the word *obligation*, both the *paraphrasis* and the *archetypation* may be deduced from what is indicated above.

Rhizophantia, indication of the *root*, might serve as a common or generic term applicable to both.

To return to *analysis*. It is by an operation of the nature of *analysis*, *primæval* analysis, that the ideas, designated by the several names of *fictitious entities*, have been formed. Unfortunately, in the case of these *fictitious* objects, the description of the way in which the analysis must, or may have been performed, will be matter of much more difficulty than in the case of the above-mentioned *real* ones.

Not to leave the field of fictitious entities, and with it the corresponding part of the field of *logical analysis*, in the state of an utterly *dark spot*, thus much has here been hazarded: and here it is high time that what has been said on the subject of *analysis* should be brought to a close.

Unfortunately, here are not only *new words*, but these in a multitude, greater by the whole number than would have been employed, could the ideas intended have, at any cheaper rate, been conveyed. But he who, in any branch of art and science, *ethics* itself not excepted, is resolved not to have anything to do with new words, resolves by that very resolution to confine himself to the existing stock of ideas and opinions, how great soever the degree of incorrectness, imperfection, error, and mischievousness which may in those ideas and opinions happen to be involved.

One parting word in relation to *D'Alembert*: lest, from the indication given in a preceding section (§ 7,) of the imperfections observable in his *Encyclopædical tree*, any unduly unfavourable estimate of the instruction derivable from the philosophical works of that illustrious Frenchman, should be deduced.

With the exception of that which contains the *Encyclopædical tree*, the five volumes of *Miscellanies*, which comprise his *philosophical* works, had not been opened for some thirty or forty years, when, in expectation of finding in one of them the germ of what has here been said on the subject of *fictitious entities*, it was thought necessary to run over it.

In that particular the search has not been successful. But, in the course of it, ample ground has been seen for the conclusion, that although, with eyes closed by prudence, or rather by necessity, treading in the steps of his illustrious precursor, he, on that occasion, kept himself below the level of his own age, yet, on every succeeding occasion, he may be seen rising high above it.

In the two last of those five volumes are contained applications, successively, and everywhere more or less successfully made, of the all-comprehending and all-commanding art of Logic, to every subjacent part of the field of art and science.

By a recent but still imperfect review of it, (such as time and eyes would allow of,) much regret has been suggested at the thoughts of its never having yet, it is believed, been brought within the reach of the English reader: for even at the present comparatively advanced period, much useful instruction, as well as, to a comprehensive mind, much gratification, might surely be reaped from a critical perusal of it.

Consummate surely is the originality, the comprehensiveness, the penetration, the discernment, the moderation, the prudence, the elegance of expression, and, amidst surrounding dangers, the steersmanship manifested in that work. It is, for that age, what for the present generation the present work would have endeavoured to render itself, could any such endeavour have found a ray of hope to animate it. Of those volumes, the fourth has for its title, *Essai sur les Elémens de Philosophie, ou sur les principes des Connoissances humaines*: the fifth, under the name of *Eclaircissemens*, &c., contains supplements to some of the principal articles of the preceding Volume. It speaks of itself as having been written at the desire of *Frederic the Great* of *Prussia*. In a translation, the supplements might with advantage, it is believed, be worked up along with the original articles: and prefixed to both might be the contents of the first Volume of the five: viz. the preliminary discourse attached to the first French Encyclopædia, and the Preface to the third Volume of that great work.

On the subject of *analysis*, however, the conceptions of *D'Alembert*, (iv. 157, 257, 287, &c.) seem not much more correct than those of *Condillac*. By their manner of speaking of it one would think it was a sort of instrument by which everything is done. In general the attention paid by men of science to the Greek language, seems not to have been so general in France as in Britain, particularly as in England. Yet even in the Logic of *Saunderson*, who can scarcely be suspected of not being well conversant with Greek, the account given of *analysis* and *synthesis*, (for by him they are both spoken of,) has not been found a clear one. By an observation taken of the *archetypal image*, had this use of the correspondent operation been sufficiently understood, all this observation might have been prevented. In the case of every name of an *immaterial object*, the *archetype* is at once an *index* and a *holdfast* to the sense of it. In the case of every name of a *fictitious* entity, the only sure test of intellection is *paraphrasis*.

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would form a more instructive, and, to all by whom its original import is borne in mind, a more satisfactory name.

Being in their original import so misexpressive,—and, even in respect of present import, one of them at least so indeterminate,—that *Natural History* and *Natural Philosophy* should give way to appellations fixed in their import, in some sort instructive, and at the worst not misexpressive, seems at any rate to be wished. Whether to be looked for seems not equally clear. To a grecianized ear in the first instance, and to an ungrecianized ear when explained to it, *Physiurgic Somatology* and *Anthropurgic Somatology* are expressive,—but then they are not single-worded. *Physiurgics* and *Anthropurgics* are, each of them, when separated from *Somatology*, single-worded. To the use of these, what seems to be the only obstacle, or at any rate the only assignable objection, is—that, being expressive of *accidents* without a *subject*—being substantives formed out of an adjective without a visible substantive—they might, for some time, fail of being sufficiently *expressive*. In themselves, (not to speak of *Algebra*, which, in its original import, is all darkness,) they are, however, in this respect, but upon a par with *Fluxions*. Even *Physiurgic Somatics*, or *Physiurgic Somatology*—*Anthropurgic Somatics*, or *Anthropurgic Somatology*—even these, though, as touching their *two-wordedness*, they are in no *better* case than *Natural History* and *Natural Philosophy*, yet in that respect they are in no *worse* case; and, in respect of *determinateness* and *instructiveness*, they stand in that so much better case, which in Section the fourth has been brought to view.

In all these instances, for presenting the import desired—the import for the presentation of which the demand is continually occurring—words, howsoever originally unexpressive or misexpressive, are—and without any very considerable inconvenience—already in universal use. Not so in the case of that branch of *Ethics*, for the designation of which the word *Deontology* has here been ventured to be proposed. Under the undiscriminating import of the word *Ethics*, a branch in itself so perfectly distinct, and which in practice so frequently requires to be distinguished from, and put in opposition to, that which joins with it in forming the two branches of the common trunk, is at present continually, and, but for those many-worded explanations, which are never given, and scarcely ever so much as thought of, irremediably confounded.*

For exemplification, thus much may perhaps have its use. To examine, in this same view, every new appellative which the Table furnishes, would surely be superfluous.

APPENDIX.—No. V.

SOURCES OF MOTION.

ANALYTICAL SKETCH of the several *Sources of Motion* with their correspondent *Primum Mobiles*.

Of Motion in general—its generation and extinction.

In the masses of matter with which man is conversant, and on which for his being, as well as his well-being, he is at all times dependent, whatsoever change is effected—this change is either itself some motion, or owes its origin to some motion of which it is the result.

Motion is the motion of some *body* or *bodies*; of some portion or portions of *matter*, of the aggregate mass of matter with which man is conversant.

Of this aggregate mass no particle can at any time, or in any place, in any direction, enter or be made to enter into a state of motion, without having to encounter a perpetual and indefatigable antagonist styled *Resistance*.

According to the commonly received distinction, this Resistance is susceptible of two

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* Some fourscore years ago, by *David Hume*, in his *Treatise on Human Nature*, the observation was, for the first time, (it is believed,) brought to light—how apt men have been, on questions belonging to any part of the field of *Ethics*, to shift backwards and forwards, and apparently without their perceiving it, from the question, what *has been done*, to the question, what *ought to be done*, and *vice versâ*: more especially from the former of these points to the other. Some five-and-forty years ago, on reading that work,—from which, however, in proportion to the bulk of it, no great quantity of useful instruction seemed derivable, that observation presented itself to the writer of these pages as one of cardinal importance. To every eye, by which those two objects have not been completely separated from each other, the whole field of Ethics, in all those divisions of it, which the Table will show, must ever have been,—yea, and ever will be,—a labyrinth without a clue. Such it has been in general, for example, to the writers on *International Law*: witness *Grotius* and *Puffendorf*. In their hands, and apparently without their perceiving it, the question is continually either floating between these two parts of the field of Ethics, or shifting from one to the other. In this state of things, a name, which, such as *Deontology*, turns altogether upon this distinction—suppose any such name to become current, the separation is effectually made, and strong and useful will be the light thus diffused for ever over the whole field. That this distinction should, on every occasion, be clearly perceived, is (need it be observed?) the interest of the great bulk of mankind. Unfortunately, this most extensive interest finds opposed to it a cluster of particular interests, which, though so much narrower, being but the more concentrated, have ever been acting against it with proportionable advantage, and hitherto with irresistible effect. One day these particular interests will be recognised. On the present occasion, to attempt bringing them to view would be consistent neither with the unity of the design, nor, perhaps, with prudence.

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different modifications; viz. 1. *Counter Motion*, i. e. active; and 2. *vis inertiæ*, or purely *passive* resisting force. But, perhaps, upon a closer examination it might be found, that that which presents itself in the character of a purely passive resisting force, is no other than an actively resisting force, produced by the elasticity of the mass to which the moving power is applied; that is, the repulsive power, the countermotion, or tendency to countermotion, of the particles of which the mass acted upon by the moving force is composed.

To one or other of these powers, if between them there can be any real difference, will be to be referred that cause, to the designation of which, when cessation of motion is considered as the effect of it, the word *friction* is applied.

For the purpose of rendering, in the best manner in which we are able, an account of the motion of such bodies as are in motion, and of the rest of such as are at rest, certain fictitious entities are, by a sort of innocent falsehood, the utterance of which is necessary to the purpose of discourse, feigned to exist and operate in the character of causes, equally real with, and distinct from, the perceptible and perceived effects, in relation to which they are considered in the character of causes.*

All bodies we are acquainted with, it is universally agreed, are compounds, as it were, of solid matter and empty space. All bodies, viz. the ultimate particles of solid matter which enter into their composition, are separated by intervals of space, in which no matter at all, at any rate none that we have any acquaintance with, is contained. To the different distances at which, in different states of its existence, the component particles of the same body are placed, are owing, in some degree, the different textures of which it is susceptible, and which, under different circumstances, it exhibits to our senses.

Take, for example, any mass of matter whatsoever: suppose an apple; the apple let it be from which Newton derived the first hint of the attraction of gravitation; the ever memorable apple which, as an object of worship to the latest posterity, ought to have been preserved from corruption in a hermetically sealed glass-case; ought to have been transmitted as an object of worship to the latest inheritors of this our globe:—the particles of solid matter of which this apple is constituted are, each of them at a certain distance from each of the several others. How happens it that they are not more distant. What is the cause of such their propinquity? The necessary fiction above spoken of provides an answer and says, *the attraction of cohesion* is the cause by the operation of which they are thus kept together. How happens it that they are as distant as they are? What is the cause of such their distance? Here again steps in the same useful respondent, and answers, It is by mutual *repulsion* that they are thus kept asunder.

It is to distinguish it from the attraction of *gravity*, of which presently, that the attraction, termed the attraction of cohesion, has acquired that name. Of this species of attraction, repulsion, it has been seen, is the constant companion, and antagonist; each of the opposite and mutually balancing effects have equal need of a fictitious cause. Repulsion is the generic name applicable to other cases. *Attraction of cohesion* is a specific one. To match with this its antagonist, the particular species of repulsion here in question requires its specific name. Repulsion corresponding to the attraction of cohesion, let this be that specific name; or rather an appellation thus multitudinously worded, being too cumbersome for use, say, the *repulsion of cohesion*: and though taken by itself, and without explanation, the appellative would, upon the face of it, be self-contradictory, yet by this explanation, to which by its texture it would naturally point, it may perhaps be found not altogether unfit for use. Instead of this appellation, or

* The necessity to which we are subjected by the imperfection of the instrument for the purposes of discourse, the necessity of mixing falsehood with truth, on pain of being without ideas, as well as without conversation, on some of the most interesting of the subjects that lie within the pale of our cognizance, is productive but too abundantly of misconception and false reasoning; and this not only in the physical department of the field of thought, discourse, and action, but also in every other. On pain of having some of the most interesting subjects of thought, discourse, and action undiscoursed of, and even unthought of, we set to work the powers of our imaginations in the creation, as it were, of a multitude of imaginary beings, all spoken of as if they belonged to the class of bodies or substances; and on the occasion, and for the purpose of this creation, we attach to them a name or sign, called a part of speech: viz., a species of word, termed a noun substantive; the same species of word as that of which, in the character of a common name, we make use for the designation of real entities, appertaining strictly and properly to the class of substances. Beholding at a distance, in the dress of a man, sitting and playing upon an organ, an automaton figure, constructed for that purpose by the ingenuity of the mechanist, to take this creature of human art for a real man, is a sort of mistake which, at a certain distance, might happen for a time to be made by the most acute observer. In like manner, beholding a part of speech cast in the same mould with the name of a real entity, a really existing substance, no wonder if, on a variety of occasions, to the mental eye of a very acute observer, this fictitious entity thus accoutred, should present itself in the character of, and be regarded and treated as if it were a real one. How should it be otherwise, when on every occasion on which, and by every person by whom it is spoken of at all, it is spoken of as if it were a real entity? and thus in a manner an universal attestation is given to the truth of a set of propositions, the falsity of which when once brought to view, cannot in any instance fail to be recognised.

for variety along with it, if for attraction of cohesion, the appellation internal attraction, or intestine attraction, be employed; for repulsion of cohesion, the term internal repulsion, or intestine repulsion, may be employed.

In the *Attraction of Gravity* may be seen one of the fictitious entities, to the operation of which, in the character of causes or sources, the birth of motion, howsoever modified, may, as far as we are acquainted with it, be referred. To the repulsion of cohesion—to this one simple cause, will, it is believed, be found referable, with equal propriety, the death of all these several motions; which, at the conclusion of the conflict maintained by the various species of attraction, endowed with their several unequal degrees of force, remains, constituting the only force by which matter is retained in that state of composition above-mentioned, which seems essential to its existence; and by which the whole multitude of its particles are prevented from being crowded together into one mass.

To account for the difference of bodies in point of distance, a sort of nominal entity is feigned, to represent the cause of it, and Motion is the name by which this imaginary cause is designated. Motion is thereupon considered (for such are the shifts that language is reduced to) as a sort of receptacle in which bodies are lodged; they are accordingly said to be *in* motion, as a man is said to be *in* a house.*

By laying out of consideration everything that concerns the particular nature of these bodies respectively; everything, in a word, concerning them, but the difference between the distance or interval between them at the one time, and the distance or interval between them at the other, we obtain the abstract idea, for the designation of which the word motion is employed. In speaking of it, we speak of it as if it were itself a substance: a hollow mass into which the body, the really and independently existing body, whatever it be, and how vast soever it be, is capable of being put, and which is capable of being communicated to that body, and so in regard to bodies in any number.

A philosopher, says the old Greek story, denying the existence of Motion, another to refute him, got up and walked. Good for a practical joke, not so for a serious refutation. Of the existence of the faculty of locomotion, the denier of the existence of motion, was not less perfectly aware before the experiment than after it. What he denied was,—not the universally exemplified, and universally known, and acknowledged matter of fact, that the same body is at one time in one place, at another time in another, and in that sense the existence of motion—but the existence of any real entity, corresponding to the appellation motion; any entity real and distinct from the body or bodies in which the motion is said to have place.

Thus early (as appears from this story) had a conception, however narrow and inadequate, been formed of the distinction between names of real entities and names of fictitious entities;† a distinction by which much light has already been thrown, and by degrees much more will be thrown on the field of language; and through that medium, on the field of thought and action; and, in particular, on the nature of the relation between *cause* and *effect*. Cause, when the word is used in its proper signification, is perhaps in every instance the name of a fictitious entity; if you want the name of the correspondent real entity, substitute the word *author*, or the word *instrument*, to the word cause.

Rest is the absence, non-existence, or negation of this imaginary receptacle. When, after observation taken of the two bodies in question, at two different points of time, no such difference of distance is found, they are said to have been during that length of time each of them at rest. Rest is thus a sort of imaginary pillar, or anchor, to which, in the English language, they are considered or at least spoken of, as being fastened.‡

Enclosed in that receptacle, or fastened to this pillar or anchor,—one or other is at every point of time the condition of every object to which the name of *body* has been attached.

The truth is, that absolutely and properly speaking, in as far as observation and inference have extended, motion is the state or condition in which, at every point, every body is, and so for ever is likely to continue. Rest is not the state of our own sun, about which the planet that we inhabit moves. If a state of rest were predicable of anything, it would be of the ideal point in the expanse of space, the *centre of gravity*, as it is called, about which, the sun on the one part, and the planets on the other, are observed or supposed to turn. The observations and inferences thus applied, in the first instance, to our sun, have been extended to those other bodies to which, to distinguish them from those companions to our earth called planets, we give the name of fixed stars; but which, determined as they have been by these observations and these inferences, it has seemed good to our astronomers not to tie to the above-mentioned pillar, but to put all together into the above-mentioned receptacle.

So it is then, that, for the purposes of discourse, as well as of thought and action, the

* The idea of *motion* is capable of being deduced from difference of position, without any difference of distance, as well as from difference of distance; but being much more complicated, the description of that case is, on that account, omitted.

† See this division discussed at length, under the head of Ontology, in this volume.—*Ed.*

‡ Not so in every language, in the French, for example, (*en repos*) *rest*, is also a receptacle.

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pillar is not less necessary to us than the receptacle. For this purpose, rest requires to be distinguished into *absolute* and *relative*. Absolutely speaking, as above, no one body is at rest; but on this our little planet, the theatre of all our little doings and sufferings, bodies in abundance are to be found, which, as between any two given points of time, having been at the same distance from each other, have, during these two points of time, together with the whole interval, if any, that has been between them, been at rest. Upon the whole, then, absolute rest is not exemplified anywhere; but, on the surface of our planet, exemplifications of relative rest may be found everywhere. These things considered, henceforward as often as *rest* is spoken of as having place, relative rest, and that alone, will be intended.

The motions in which the various effects, as yet observed by us to be produced by the powers of nature, modified or not modified by human art and industry, have their essential causes, are derived from various sources. Of these motions, obvious, as when once brought to view, the task of giving a list may seem to be—obvious, and, by its conduciveness to the purpose of instruction, presenting an incontrovertible claim to the notice of the institutional writer, who, for the theatre of his labours, has chosen the field of Natural Philosophy,—the task of giving such a list, hath, it is believed, as yet, been undertaken by no one. No work in which that task has been executed, or endeavoured to be executed, is as yet anywhere to be found.

Consideration had of the utter absence of all information from more competent hands, to the author of these pages, how little soever accustomed to apply his industry to this department in the field of science, it occurred that an attempt to afford, in a manner however inadequate, a supply to this deficiency, might have its use, were it only by attracting to so interesting a subject, which presents so strong a claim to their notice, the attention of those from whose more adequate learning and ingenuity it may receive more correct and complete explanation.

Of these various sorts of motions, some are, as far as we have reason to believe, in their nature perpetual, unintermitting, or, if a common figure of speech may be allowed, immortal. Others, and by far the greater number, in their nature mortal and perishable.

Of these two so materially different heads, Which come under the former? Which under the latter? In any attempt to give answers to these questions, an answer to the question concerning the existence of what is called *perpetual motion*, is necessarily involved.

Of the following sketch the design is, in the first place, to perform the enumeration of the several distinguishable sources of motion, considered as it is wont to be produced, or capable of being produced by human art, in some determinate direction, for the purpose of accomplishing some determinate object or end in view. In the next place, by means of a systematical sketch, to bring to view the several points of relation between these several sources of motion,—the points in respect of which they agree with one another, and those on which they differ.

By this means a facility, it is hoped, will be given to the decision on the question, whether, in the preceding enumeration all such sources, actual and possible, are included; or whether any, and what are omitted.

Primum mobile is a term already in use; and by it, in each instance, is designated that mass of matter, which, when from the particular source in question, motion is considered as derived, is considered as being of all the bodies by which the motion is experienced, which, at the time in question, issues from that source, the first in which it has place. Accordingly, corresponding to every distinguishable source of motion, a *primum mobile* will be to be brought to view.

Of the two expressions, viz. sources of motion, and primum mobiles; the latter is the one, principally, if not exclusively, in use. To the other the preference has, notwithstanding, here been given, and that on several accounts.

1. It is only in as far as it points to the source whence it is derived, that the question, *what* or *which* is the *first mover*? (the body which, on the occasion in question, is of all the bodies in which the motion is observed to have place, the first in which it makes its appearance,) is an object of regard. In the class of objects designated by the generic word *motion*, men behold the cause of every effect, desirable or undesirable, which they perceive to take place. But various are the sources whence this important agent is seen to be derived. An object of anxious and continual research cannot but be, the determining, on every occasion, from which of all these sources, the article thus in universal demand, may be derived to most advantage.

Of this inquiry, source is the only direct and intrinsically important object: the primum mobile is so no otherwise than either in respect of its affording indication of the source, or, in respect of the need there is of commencing with this article, the plan of the operations instituted, for the deriving down to the ultimate object, whatsoever supply there may be occasion to draw from this source.

2. In many instances in which the source is sufficiently distinguishable to admit of a separate name, the primum mobile is altogether undiscernible; or, to speak more properly, a primum mobile is a thing that has no existence, —two bodies, or sets of bodies, move each of them towards the other, both beginning at the same instant of time; as is plainly the case, for example, in all those minute motions or dances of atoms, which belong to the experience of the chemical branch of science.

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In a word, of the phrase, source of motion, the applicability will be seen to be universal; that of primum mobile, very confined; so much so that it is only in deference to usage, that any notice is here taken of it.

Sources of motion, enumerated with their corresponding *Primum Mobiles:* a sketch supposed to be all-comprehensive, and now, for the first time, attempted.

I. *Selenic,** *Selenigenous,*† or simply mechanical source of motion.

By the appellation *Attraction of Gravity*, stated also simply *Gravitation*, is designated the species of force by which, as far as observation or induction have extended, all particles of matter, without exception, are drawn towards one another: the heavenly bodies, commonly termed in contradistinction to planets, fixed stars, (they being comparatively such,) among the rest our sun, not excepted.

On this our earth a body is said to *fall*, when it is understood to come nearer to the centre of the earth than it was before. When to any mass of matter in the liquid state, it happens to fall otherwise than by means of the removal of some mass of matter in the vessel or state which had served for the support of it, in such case, antecedently to such its fall, it has by some assignable cause been made to *rise*. The only constantly, and regularly, and universally operating cause by which, on this our earth, water is raised, is the action of the moon. The mass of matter contained in that secondary planet, the motions of which are principally determined by those of that which we inhabit, operating in virtue of the universal principle of *gravitation* upon the whole mass of matter contained in ours. But in our planet, that part of its mass which is in a state of liquidity, or in a gaseous state, is free and able to yield, while that which is in the state of solidity, being kept together by another source of attraction, called *Attraction of Cohesion*, is not able to yield, any otherwise than the whole of it together. Hence, as the moon moves, while the solid part of the earth's substance remains relatively and apparently stationary, the fluid part of the mass is perpetually in a state of relative motion, which is determined by that of the moon, and which, bating the disturbance it receives from *winds*, of which further on, would be a perfectly regular one.

In these circumstances, as it rises, any solid body floating on its surface is made to rise with it, and, as it falls, to fall; and thence in both cases, to operate with a force proportioned to its weight upon any body with which it is connected; and thus, from body to body, through any series of bodies, till the motion thus produced reaches that body or assemblage of bodies, on which, for the purpose of the practical use in question, the ultimately serviceable impression is intended to be made, to the end that the form adapted to that use may be given to it.

Laying out of the account *temperature*, and *changes of temperature*,—i. e. the quantities of perceptible heat in particular places,—viz. in the air, or other bodies, by which these places are respectively occupied;—laying out of the account temperature, and those other meteorological circumstances by which the fall of water, as will presently be mentioned—the fall of water in the shape of rivers—is produced, it is only by the attraction of gravitation, that has place between the earth and the moon, that this source of motion is afforded. Selenic or Selenigenous, is, therefore, a term which, if employed for the designation of this source of motion, will serve to indicate the characteristic nature of it.

Corresponding *Primum Mobile*, in this case the *Moon: Secundum* mobile, the water so made to rise and sink: *Tertium* mobile, the solid body which, floating on the water, is made to rise and sink with it: *Quartum* mobile, that part of any system of machinery with which the *Tertium* mobile is in immediate communication. The system of machinery in which use is made of this source of motion, and its corresponding Primum Mobile, is called a Tide-Mill.

II. *Hydropiptic,*‡ *or Chemico-Mechanical* § *source of Motion.*

A river is a mass of falling water—*i. e.* a mass of ice which, by mixture of a certain proportion of the matter of heat, is brought into a liquid state, and having, in such its liquid state, or at first in its state of solid ice, been dissolved in the air of the atmosphere and so raised aloft, is by means of a diminution in the proportion of caloric mixed with it, changed from the gaseous state into a liquid state, and by the attraction which, in common with all matter stationed at the surface, it has for the centre, of the earth, runs down till it arrives at a spot at which it finds its further immediate descent prevented by such portions of the matter of the earth as are in the solid state. In so doing, it acts and presses upon all bodies opposed to it, in such manner as to communicate, or tend to communicate, to them a quantity of motion not greater than that which it of itself possesses.

Corresponding *Primum Mobile*, in this case the *falling water*. *Secundum* Mobile, any moveable solid body placed, as in the case of the mainwheel of a water-mill, in such sort as

* [Selenic.] From a Greek word which signifies the moon.

† [Selenigenous.] From two Greek words; the first of which signifies the moon, the other, *originating in*, or *sprung from*.

‡ [*Hydropiptic.*] From two Greek words, the first of which signifies *water*, the other *falling*.

§ [*Chemico-mechanical.*] Because, in this case, it is only by means of the chemical operations of solution and precipitation that the mechanical power is produced.

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to receive the motion which it is capable of communicating; and, therefore, to communicate it onwards according to the nature of the practical effect which, by the use of the water-mill, is intended to be produced.

III. *Stereopiptic** source of Motion.

If, as in the case of water, any portion of that part of the earth's surface which is in the solid state were by any regularly operating cause disposed to detach itself from the rest, and like the sand in an hour-glass, in obedience to the law of gravitation, approach nearer to the centre of the earth; if, for example, as in Africa and elsewhere, there are seas of sand, the fall of matter thus having place in a solid state might, as well as the fall of matter in a liquid state, in the way of communicating motion for the purpose of producing useful changes in the condition of bodies, be put to use.

But of any such fall regularly produced by the unassisted powers of Nature, no instance has ever been known; nor forasmuch as nature furnishes not for other substances, any such regularly operating causes of *elevation* as she does in the case of water, could it anywhere be of long continuance. It is, therefore, only for the purpose of illustration that, in the catalogue of sources of motion, motion thus produced is inserted.

But when, by human art and industry, for any particular purpose, in the instance of any mass of matter, whether in a liquid or in a solid state, a fall or descent has been produced, in this case, there is a source of motion which, by economy, may be turned to account. On this head, see No. 15, *Economistic source of Motion.*

IV. *Anemistic, or Aeropnutic source of Motion.*

Considered *in* a state of motion, and in such quantity, and with such velocity, as to be capable of producing a considerable quantity of effect, any body, when in the gaseous state, is called *wind*. Of all bodies in a gaseous state, the only species which exists in a quantity sufficient to operate with regularity, in the character of a source of motion, is that in which by far the greater part of the contents of the atmosphere consist, viz. the mixture of oxygen gas and azote, with the occasional addition of carbonic acid gas, in considerable quantities, and many others in minute quantities.

Corresponding *Primum Mobile* in this case, the air considered as being in motion, and in whatsoever direction it may happen, viz. the wind. *Secundum* Mobile, any body which, for the purpose of receiving such quantity of motion as the wind is able to communicate, is opposed to it; for example, the *sails of a windmill*, and the sails of a ship.

* [*Stereopiptic.*] From two Greek words; the first of which signifies solid; the other, *falling*, as above.

V. Barometrical source of Motion.

Independently of the *Motion*, which, as in the case of wind, the air is liable to receive, from various causes, principally belonging to the head of temperature, *i. e.* change in the quantity of the matter of heat in a free state mixed with it, a motion in one particular direction, viz. a vertical one, and that as it may happen sometimes in the way of rise, *i. e.* increase of distance from the centre of the earth; sometimes in the way of fall, *i. e.* decrease of distance from the centre of the earth is almost continually impressed† upon all matter and, accordingly on all liquid matter, lying under it. If, while the quantity superincumbent on a certain portion of matter in a liquid state increases, the quantity superincumbent, on a portion of the like matter communicating with it, is kept from receiving increase, the consequence is, that the quantity of air thus insulated and detached from the rest, (being in a state of pressure determined by the altitude of the whole column of air, from the solid or fluid part of the earth's surface in that spot, to the extreme limits of the atmosphere, while the other non-insulated portion was left free to receive the increase of quantity, and accordingly did receive it,) will yield to the greater pressure, and thus suffer the liquid matter to rise in the vessel in which the air has thus been kept in an insulated state.

The nature of things will scarcely admit of the applying of this source of motion with advantage, comparison being made with the other sources of motion which have been, and those which remain to be brought to view; so great is the quantity necessary to be kept in the insulated state; so great accordingly the expense of the receptacle in which it is to be kept, compared with the smallness of the quantity of motion capable of being thus produced, and the uncertainty at what time, and for what length of time, any motion at all will be thus producible. But, in the way of curiosity, a machine of this sort was once produced, and formed one of the articles comprised in the museum, called from the maker, Cox's Museum, and disposed of in the way of lottery, under a special act of Parliament, in and by which this product of mechanical ingenuity was exempted from the operation of the law by which lotteries, made on account of individuals, stood prohibited.

In these circumstances, the air operates somewhat in the manner of the water in a *tide-mill*. Corresponding *Primum Mobile*, in this case, the air of the atmosphere considered in the state of simply vertical ascent and descent.‡

† By the mere increase of the quantity resting on any given portion of the solid part of the earth's surface.

‡ [*Barometrical.*] From the instrument called the Barometer: an appellation derived from two

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VI. *Thelematic,** or *Myiobrachiatic*† source of Motion.

In all cases in which it is produced in any considerable quantity, Motion, when, by an exertion of will produced in an immediate way, or in any part of the body of a living animal, is, as far as the powers of observation extend, found to be produced by the shortening of a mass of muscular fibres.

For a long time, in all the cases in which, by the will of men, motion is to any purpose produced, for an indefinitely long period in the history of man this was the only source of motion drawn upon and employed; and in those assemblages of human beings which continue in the state of savage life, this is still the only source of motion that is employed.

In most cases, for the production of the effect ultimately in view, the motion derived from this source is employed in a direct way, and without the intervention of any such apparatus of bodies as is designated by the word instrument or machinery, employed for the gaining of power: machinery not being so much employed in giving direction or quality to motion derived from this source, as in giving direction or quality to motion derived from the above-mentioned and other more powerful sources.

But neither are instances by any means wanting, in which, even with the intervention of very elaborate and complicated systems of machinery, this source of motion is the only source employed; the machinery having for its object the production either of the particular direction desired or of velocity or time, at the expense of labour, or of quantity of matter put in motion at the expense of time, or of steadiness and regularity at the expense either of time, of labour, or of both.

By the mere contraction of muscular fibres, the greatest quantity of force employed, is that in which the animal force of some animal stronger than man—such as a horse, an ox, or an ass—is employed. In this case there are two different wills employed: that of the human being, and that of the inferior animal, whose will receives its impulse and direction from its human ruler. The will of the inferior animal is employed for giving birth to the motion; the will of the superior for giving direction to it.

Corresponding *Primum Mobile*, in this case psychological, the fictitious entity called the will; *Secundum* Mobile, the mass of muscular fibres thereby shortened; *Tertium* Mobile, the unbending parts of the animal machine, viz., the bones, according to the limb or other member on which the motion is impressed; *Quartum* Mobile, the external moveable body to which the motion thus generated is communicated in the first instance.

VII. *Parallactico-Sunorotic*, or *Alternate Gasification* and *Digasification* Source, or *Steam-Engine* Source.

Elasticity, *i. e.* that property by which, while in virtue of the universally operating principle gravitation, these, as well as all other particles of matter, are attracted towards the common centre, and thence towards one another, they are (while in this state by the introduction of the matter of heat) made to repel one another. In the case of every body, so long as it remains either in a solid or in a liquid state, the field of the operation of this property has its limits, and those comparatively very narrow ones. In the case of the same body, when in the gaseous state it has no determinate limits: and the quantity of matter of all other sorts contained in the body being given, the degree of this elasticity, and thence the quantity of motion communicated by it to any body which stands opposed to it, increases with the quantity of the matter of heat mixed with it.

When without any such change in its external texture, as among Chemists is designated by the word *decomposition*, a quantity of matter is by the mere intermixture of a quantity of the matter of heat transformed from the liquid into the gaseous, *i. e.* the indefinitely elastic state, in this case by the mere abstraction of the quantity of heat by which this effect has been produced, it is reconverted to the liquid, *i. e.* to the definitely elastic state. When, by and during the intermixture of a certain quantity of caloric, it has by the continuance of its unlimited elasticity, been generating and communicating a proportionate quantity of motion, if in a closed receptacle, by the application of a mass of matter in which a less quantity of caloric in a free state, is intermixed, it be divested of its extra quantity of caloric, and thus reduced to its definitely elastic or liquid state, it is then in a condition ready to be, by the same means, as before, converted anew into the gaseous state; and in this state, to be employed in the generation of a quantity of motion, which, if generated under the same circumstances, will be exactly equal to that generated in the first instance: and, in this way, by the alternate conversion and reconversion of the same mass

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Greek words; the first of which signifies weight, (viz. of the air) and the other a measure, or instrument for measuring. In respect to principles of construction, as in the text, that instrument and the one here described are the same. Only in the case of the Barometer, the object being not to generate motion, but merely to indicate the changes in the height, and consequent weight and pressure, of the column of air superincumbent on the place or portion of space in question at different times, no greater quantity of matter of all kinds is employed than the small quantity necessary for this latter purpose.

* [*Thelematic.*] From a Greek word, which signifies *the will.*

† [*Myiobrachiatic.*] From two Greek words; one of which signifies a set of muscular fibres; the other, shortening.

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of matter, the alternation between a state of liquidity and a state of gas, between the liquid and the gaseous state, a proportionate quantity of motion may for any length of time be generated.

If, in the form of a parallelopiped, or that of a cylinder, (the most commodious, on several accounts, is that of a cylinder,) the receptacle in which the liquid (say, as being *cheapest*, the *water*) is thus converted into the gaseous, and reconverted into the liquid state, be kept to such a degree close, as that no portion of it, either while in the liquid or while in the gaseous state, can make its escape, at the same time that a mass of solid matter, one of the boundaries of which forms one of the boundaries of this receptacle, is as free to move in any direction backwards and forwards, (the most convenient is the vertical, because in that case after the occasionally generated motion, generated by elasticity, has been expended, the constantly existing force of gravity suffices to produce a correspondent quantity of motion.*)

If, of the mass of matter, while in the gaseous state, any portion make its escape, the larger the quantity which thus escapes, the larger the quantity of indefinitely elastic matter which, expending its motion upon bodies other than those to which it is intended that the motion should be communicated, is thus expended in waste.†

The system of machinery in and by which motion derived from this source is employed, is called the *Steam-Engine*. *Steam* being the name by which water (till comparatively of late years, the only species of matter which was clearly seen to be alternately interconvertible for any length of time from the liquid into the gaseous form, and *vice versâ*) was alone in its gaseous form designated.

Primum Mobile, in this case, the water while operating in its gaseous or indefinitely elastic state. *Secundum* Mobile, the mass of solid matter (called, in the steam-engine, the *piston*) to which the force thus continually generated is communicated.

Some thirty or forty years ago a source of motion, which may be considered as analogous in some respects to the barometrical, and in others to the parallactic source, presented itself to the imagination of the writer of these pages. An instrument by which application was made of it might be styled the *Flash-Pump* or *Rarefaction-Pump*.

Compared with the steam-engine, it has the advantage of being capable of being so employed as to generate within a given time, and, as it were, by one stroke, a much greater quantity of motion than within the same time, and at one stroke, could be raised by any steam-engine. But whether the advantage thus gained could, by any circumstances, be rendered such as to overbalance or balance the advantage possessed by the steam-engine in the article of quickness of reciprocation, is a question, the answer to which must be left to any person whose positive knowledge of the subject may dispose him, whilst it qualifies him, to make the requisite calculations.

The principle may be thus explained. Out of a hollow cylinder open at both ends, and in a vertical position stationed in an open reservoir of water, a portion of the air being driven out by the sudden application of heat in a manner analogous to that employed in the Montgolfier or rarefied air balloon, a correspondent portion of the water being thus made to rise and occupy its place, may, by running out, perform the office of a *primum mobile*.

For speediness of combustion a match composed of tubes open at both ends, such as would be afforded by reeds or straws, the longer the better, cut at each end close to the knot, and, after being dipped in a solution of nitre, would, whatsoever may be the case in regard to economy, at least be as well suited as any others which the nature of the case could furnish. Matters must be so ordered, as that, when the rarefication thus produced by the combustion of this match has attained its maximum, a cover shall apply itself to the top of the cylinder: and the more the degree of closeness wants of that perfection, for the designation of which the name of *hermetical* is wont to be employed, the less, of course, will be the rarity of the included air, and the less the quantity of water raised by the pressure of the air on the water of the reservoir. Matters must likewise be so ordered, as that, when the height of the column of water thus raised has attained its maximum, it shall be

* This sentence is incomplete: what was meant to be announced was, probably, that by this construction the force generated is economised.—*Ed.*

† Some thirty or forty years ago, an Hungarian of the name of Kempel, applied to me to consult with me about an invention of his which he regarded as an improvement on the steam-engine. It consisted in the omission of the piston, in such sort, that the steam, as fast as generated, and without being recondensed, should operate immediately, and in the open air, upon the float-boards of a water-wheel: in which case, before it had time to lose all its extra caloric, and with it all its elastic force, some small quantity of motion, though comparatively a very small one, might occasionally be expected to be generated. It might be termed an open steam-engine. Will it be believed? This was the same Kempel by whose inventions of the automaton chess-player, and the automaton speaking-child, the curious were in most parts of Europe so much surprised and gratified.

The chess-player in the character of a Turk was beaten by very few Christians; and I know not whether the contrivance by which the motion was communicated from the directing mind to the chessman was ever divulgated or discovered.

The child, though at the time when I saw it, it had not, by a good deal, gone through the alphabet, yet pronounced a number of intelligible words, in the composition of which consonants as well as vowels were included. To produce the sounds, he worked with both his hands at a time, concealed in a sort of satchel or leather bag.

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prevented from sinking through the same channel through which it rose, and shall, by this means, be forced to fall in the direction in which, while falling it will perform the function of a primum mobile.

To give continuance to the effect, matters would require, to be so ordered, as that, as soon as the effect produced by the first match has ceased, a second shall take its place; and so on: and, for the accension of each match, the place of human reason might be supplied by some one or other of the expeditious modes of accension already in use. While that part of the water which is performing the function of a *primum mobile*, is for that purpose descending gradually, a partition sliding horizontally must separate it from that part which is to descend suddenly to make room for the reascent.*

Compared with any which is employed in the steam-engine, the species of fuel would, of course, be in a very high degree, more expensive; whether by the superiority of the quantity of water thus raised by a given weight of the fuel, that inferiority would be counterbalanced, is another point which must be left to calculation in the hands of any person in whose eyes the labour may present itself as capable of yielding a compensation.

If, upon calculation, this source of motion should, in inexperienced hands, be found to afford no promise of being in comparison of the steam-engine, capable, in any situation, of being employed to advantage, it will in this respect, stand upon a footing with the Barometrical source, the Magnetic source, and the Electric and Galvanic sources.

VIII. *Aplosyncrotic*, or *Simple-Explosion* source.

When not without decomposition, the conversion from the non-gaseous into the gaseous state is effected, reconversion cannot, by the abstraction of the extra quantity of caloric, as above, be made to take place.

By the art of the Chemist, bodies in great variety have been discovered, in the instance of which, they being, all of them, in the solid state, by the application of a certain quantity of caloric, accumulated for the moment, in a portion of matter, be it ever so small, the whole mass, be it ever so large, is with an almost instantaneous rapidity, converted from the solid, without passing into the liquid, into the gaseous state, and thereby a quantity of motion generated, proportioned to the quality and quantity of the matter in the mass thus suddenly transformed, and capable of being employed in the generation of motion, as in the *steam-engine, closed or open*, as above.

Of these compounds, the one most known, and that which being, in respect of cheapness, most advantageous, or the only one thus employed in general practice, is *gunpowder*.

In this way, viz. in the case where, antecedently to the gassification, the matter in question is not in the liquid but in the solid state, by the gassification of a given quantity of matter, a much greater degree of elasticity, and in this way a much greater quantity of motion can, in a given space of time, be produced, than by the conversion of a quantity of matter without decomposition from the liquid into the gaseous state.

But, forasmuch as in this way, instead of being employed an indefinite number of times, the mass of matter thus employed in the generation of motion cannot be made to serve more times than one, hence in cases in which, in one and the same receptacle, the generation of motion is required to be kept up without interruption for a constancy, and for an indefinite length of time, this mode of simple explosion cannot be employed with advantage.

In the cases in which it is employed, such as that of the destruction of solid bodies, dead or living, at great distances, the preservation of the gassified matter not being possible, and the quantity of motion producible by a given quantity of it, being so much greater than could, by the gassification of the same quantity of water, be produced by a steam-engine, hence it is, that to these destructive purposes, the costly matter, gunpowder, and not the cheaper matter, water, and coal for heating it, are employed.

In the case where, in a ship of war endeavouring to escape from an enemy's ship, stern-chase guns are fired, over and above the principal effect, the taking the chance for impeding the advance of the enemy's ship by damage to the ship and crew, some advantage is said to be obtained in the shape of acceleration given to the course of the ship from which these guns are fired.

Some fifty years ago, or more, a person of the name of *Moore*, a linen-draper in Fleet Street or Cheapside, formed a plan for giving motion, upon this same principle, to a carriage by land. By the description of a carriage which was to go without horses, under which was to be understood the going without the application of muscular force, the particular means proposed to be employed being kept secret, great expectation was excited, or endeavoured to be excited, as if it were an invention applicable to general use. No trial of it could naturally be made without demonstrating at the same time the possibility of the achievement, and its inapplicability to any generally useful purpose. By persons unacquainted with the general principles of mechanics and chemistry, a matchless degree of velocity was expected, and at length announced to be thus attainable. Wagers, to a consider-

* For the purpose of this separation, attached to the cylinder, during a sufficient portion of its altitude, may be a hollow paralellepedon of correspondent diameter, one side of it being constituted by the sliding partition in one piece, or as many pieces as may be found most convenient.

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able amount, were, at the time, said to be laid upon the subject of it. If at any time an actual trial of it were made, the project was, of course, thereby shown to be abortive. Had gunpowder been mentioned as the source trusted to, its inutility would not, to any person tolerably well versed in mechanics and chemistry, have afforded matter for any the smallest doubt. But the nature of the source not being divulged, a man who for this or some other purpose, happened to take a comprehensive view of the whole list of possible sources of motion, would scarcely, on the first mention, have ventured to have pronounced the impossibility of the results declared to be expected.

IX. *Magnetic* Source.

After the man, the horse, the wind-mill, the water-mill, and the steam-engine, considered with a view to general and extensive use, all other sources of original motion dwindle into insignificance.

Other sources of original motion, however, still remain, which in the way of curiosity, and in a logical view, are necessary to complete the inventory of the distinguishable sources of motion, which, as being known to be in existence or in prospect, present a claim to notice.

Magnetism, Electricity, Galvanism—to one or other of these heads, it is believed, may be referred all the other distinguishable sources of motion with which we are as yet, or have any prospect of becoming acquainted.

In Magnetic attraction may be seen a source of motion, which, of a first view, is not unapt to present the idea of an inexhaustible one. To magnetized iron, power (attractive force) has, and therefore can, at any time be given superior to that of any other motive power which, for a constancy, the muscular power of man is capable of creating: a magnet never tires; and from diuturnity of action, instead of decrease, magnetic power derives increase.

Unfortunately, of any motion derivable from this source, the death is immediate and not less certain than the birth. The contact produced—the contact which it has, in a manner, for its object—all motion is at an end.

For concealing the source of motion, and in that way affording the pleasure of surprise to uninitiated minds, the use of this instrument is well enough known. If motion could for a continuance be produced by it, no source of motion could be so economical a one: but of this there are unhappily no hopes.

Contrivances, whereby to the same magnetized bar a number of plates might be presented in a circularly recurring succession, are sufficiently obvious; and that in such manner that contact never taking place between the bar and any of these plates, the magnetic appetite might still remain unsatisfied. A brass wheel, for instance, in a vertical position, turning on a fixed axis, is, say at the end of each spoke, furnished with an iron plate; up to this wheel, on a plane forming a tangent to the circumference of the wheel, a magnetized bar is slid till it arrives at the spot at which the attraction between itself and one of the plates rising from the wheel, in a position exactly vertical, becomes perceptible. By being fixed to the wheel, this plate is prevented from coming in contact with the bar, and thus satisfying the magnetic appetite. If by the action of the bar upon the plate first presented to it, the wheel with the plate on it could be brought so far round, as, after coming a proportionate way under the bar, to present to it a second plate, and so on, the circuit would thus be completed; and if once completed, would, by the operation of the same causes, be continually renewed, and thus the problem of the perpetual motion would be accomplished. Unfortunately, between the action of the magnet on the second presented plate, in a direction tending to continue the revolution of the wheel and its action on the first presented plate, after its descent, in a direction tending to prevent such continuance, an equilibrium would, at some point or other in the circle, take place; and at that point the revolution would stop.

For the prevention of this catastrophe, to a mind better furnished with practical mechanical experience than with sound theory, the resources of mechanic art might suggest a variety of expedients,* of which the insufficiency would, it is believed, be proved by experiment in each instance. But the nature of things would, it is believed, be inexorable. The track of the subject is not, however, to such a degree beaten, but that, in any institutional work on the subject of mechanics, a demonstration on this ground might, it is supposed, have its use.

X. *Electric* Source.

That the list may not be justly accused of being an imperfect one, this source of motion must be inserted in it. But compared with those that have been already mentioned, its radical inutility will be altogether obvious.

Of those which appertain to the cognizance of the Chemist, no decomposition, composition, or recomposition, can have taken place but motion must have been produced. But in all those cases the quantity of motion is at the source, by much too small, and confined within too narrow limits to be capable of being communicated to any exterior body, in such sort as to be productive of any serviceable or even so much as sensible effects.

In so far indeed as, in virtue of any such decomposition or composition, any change of matter from a solid or a liquid state into a gaseous state has place, motion in a sensible

* For instance, making the angle made by each plate with the circumference vary at different parts of the round, or the whole plate drop and form a tangent to the circumference of the wheel, instead of standing up at right angles to it.

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degree is produced: but, in so far, what has place in this way comes under a head already brought to view, viz., that of the aplosyncrotic source.

Similar in this respect to the magnetic, the electric attraction extends over a space not limited, as in the case of chemical attraction, between particle and particle of a mass in the liquid state, by the sphere of attraction of cohesion. It is even, as in the case of thunder and lightning, capable of operating in the character of a source of motion with great force and through a great extent of space.

Unfortunately, in as far as it is under command, the quantity of motion derivable from this source is by far too small to be in comparison of any of those ordinary sources abovementioned, of any the smallest use; and when the quantity of motion produced by it is considerable enough to be put to use, were it but under command, it is altogether incapable of being put under command; and by this dilemma, it is completely withdrawn from use.

XI. *Galvanic* Source.

By the same consideration by which the obligation of inserting in the character of sources of motion the Electric power, the like obligation in relation to the Galvanic is created.

Already by application made of the species of physical power thus denominated has been produced a motion of long continuance, a motion which presents the idea of, and falls little if any short of, the character of a perpetual one. Though in a perpetuity so *curious*, and in that respect so desirable, a *solution* of continuity seems liable to be ever and anon produced by an untoward state of the atmosphere.

But by the irreversible laws of nature, the utmost that in the case of generating motion can be done by application of that species of power, is, in comparison with what can be done by motion derived from the ordinary sources, so completely in miniature, that all the achievements capable of being performed by power of this description, seems irrevocably doomed to be confined within the field of *curiosity* without ever extending themselves over any part of the field of *use*.

In one laboratory, twenty thousand Galvanic dishes have been, it is said, and probably at this moment are at work; and for a fruit, and at the same time a proof of their labours, a peal of bells kept ringing by them. But scarcely by a hundred times as many, could the sum of their action be brought to bear upon one point,—could any quantity of motion applicable to any purpose of vulgar use be produced.

XII. *Antactive*, or *reactive* source: the source of the application of which the use of springs furnishes an example.

In some instances when, in consequence of external pressure applied to it by another body, a portion more or less considerable of the whole mass of a body has been forced into a portion of space different from that which, antecedently to such pressure, was occupied by it, (the remaining part continuing fixed,) the part that was so removed returns into its antecedent position; in as far as this restitution has place, the body is said to be an *elastic* body, and a correspondent *fictitious entity*, a *property*, a *quality*—the property or quality of *elasticity* is said to belong to it.

An instrument to which, by appropriate configuration this property has purposely been bestowed, is termed *a spring*.

A *spring* may be defined a *reservoir* of *motion*. With reference to *motion*, it performs exactly the office which a reservoir or receptacle of any kind performs with reference to *matter*.*

A reservoir of any kind—a reservoir, suppose of water—cannot, for any purpose, supply any quantity of matter greater than has been introduced into it: a *spring* cannot supply any quantity of motion greater than has been introduced into it, viz. by what may be called the *pre-active* or *tensive* force.

In general the greatest quantity of matter which, for any purpose, a reservoir can furnish is not quite as great as the greatest quantity of matter—say of water—which, having been introduced to it, has been contained in it at one and the same time: by the attraction of cohesion, a portion more or less considerable is detained by the matter of which the boundaries of the receptacle are composed, and remains in contact with them; in like manner, the greatest quantity of motion which, for any purpose, a spring can furnish is probably not quite as great as the quantity of motion, or capacity of motion, which, having been introduced into it, remains in it; by means of the phenomenon for the designation of which, the word *friction* has been employed, a portion more or less considerable of whatsoever motion had, for the purpose in question, been infused into the spring, has been absorbed, as it were, and destroyed.

To *actual motion*, the sort of *capacity* for motion, for producing those perceptible phenomena, for the designation of which the word motion is wont to be employed—in a word, the sort of capacity for motion which is in this way kept in store, may be considered as bearing a relation similar to that which in the case of heat, what is called latent heat bears to sensible heat; it is nothing more than a capacity of affording sensible heat; and the substance with which it is combined, and in

* To the inhabitants of classical antiquity, the use of springs seems scarcely to have been known. Neither in Latin nor in Greek has any word been found that seems to have been employed in the designation of it.

In any one of the instruments found in any one of the buried cities, is any example of a spring to be found?

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which it is, as it were, enclosed and imprisoned, may, in virtue of it, be considered as a *reservoir* of sensible heat.

The action and efficiency of a spring is produced by, and its efficiency depends upon, and is proportioned to the elasticity of the matter of which it is composed: the extra *elasticity*, that is, what may be called the repulsion correspondent to the attraction of cohesion; or, for shortness, the repulsion of cohesion; the repulsion by which in correspondency with the antagonizing force, viz. the attraction of cohesion, the texture of the substance is determined.

To introduce, into the substance designed to serve as a spring, the quantity of latent motion desired, some external force is and always must be applied, in such manner as to counteract and overpower the repulsion of cohesion, in virtue of which, at the spot at which the external force is made to act, the particles of the body are kept at a distance from each other. If, upon the removal of their external pressure, no other obstacle being opposed to the action of the repulsion of cohesion, the particles of matter in the spot in question arrange themselves exactly in their former places, and thence at their former distances from each other, the matter of which the spring is made, is restored to a form exactly the same as that in which it was, before the pressure. In this case the body is said to be perfectly elastic. If in any part, after the removal of the pressure, the form of the substance is different from what it was antecedently to the application of the pressure, in as far as the form is thus changed, in so far in the parts in question has a correspondent quantity or degree of the repulsion of cohesion been destroyed. In this case the body is imperfectly elastic; the degree of imperfection being in correspondency with the quantity of the repulsion in question destroyed, and the magnitude of the permanent change, which the form of the body has undergone.

The mode in which the *latent motion* is introduced into the reservoir, may be either pressure *(impulse)* or tension *(distension.)* For pressure, (impulse,) no more than one fixed point is necessary; for tension, two at least are necessary. In the case of the bow and the catapult there are three.

In the case where the latent motion is produced by tension, is it by the repulsion of cohesion alone, or by that and the attraction of cohesion together, that the reaction and consequent reinstatement is produced? Answer. It should seem by the repulsion of cohesion alone. Why? Because, in as far as the distension has place, the particles are removed from one another to a distance at and beyond which the incapacity of the attraction of cohesion to act, might be proved by juxtaposition in an exhausted receiver.

Of whatsoever sort the spring may be, and to the production of whatsoever ultimate effect meant to be applied, it cannot be put to use any further than as, whether by impulse or distension, as above,—a quantity of latent motion has been treasured up in the matter of which it is composed. In as far as any such quantity of latent motion has been injected into it, the spring may be said to be *charged*. As the spring is put to use, the motion thus treasured up is expended, or, as it were, consumed. The expenditure may be either *sudden* or *gradual*. It may be termed sudden when the time occupied in the expenditure is not determinately greater than the time that had been occupied in the infusion of it. If it be gradual, it is so in consequence of the retardation which it experiences from some opposing and gradually yielding counterforce.

The term at which the expenditure or consumption, whether sudden or gradual, is destined to take place, may be either immediately upon the termination of the winding up or other operation by which the motion is infused, and the spring charged,† or any subsequent instant of time: in the former case, the spring may be termed a spring for immediate action; in the other case, a spring for *predestinated action*.

In the case of the ordinary time-piece, the spring is a spring for immediate action; and the expenditure of the injected latent motion gradual.

When the expenditure is gradual, in the course of it, and before any fresh supply is injected, it may be employed according to the quantity of it, in the production of any effects (quantity consumed by friction deducted) to which the same quantity of original motion could be applied within the field of motion within which the process is confined. Of these effects, the most in use to be produced are the two sorts of clocks termed an Astronomical clock and a Musical clock.

An Astronomical clock is nothing more than an ordinary time-piece applied to the indication of a greater number of points of time, in the same length of time, than in the case of an ordinary clock or watch.

In a Musical clock, a system of tubes being provided, into each of which, the air being drawn at a certain aperture, a particular sound is thereupon emitted, and a constant stream of air being injected into a box (for example by a pair of bellows) in which these tubes terminate, matters are so ordered that, at preappointed times, the aperture necessary to produce the intended succession of sounds shall be opened, and, when the quantity of time allotted, in each instance, to the sound in question has elapsed, shall thereupon be instantaneously closed.

In the case when the general expenditure

† When into an electric jar an extra quantity of electric power has been infused, the jar is said to be *charged*. By analogy, a spring, when the quantity of latent motion, on which its action depends, has been infused into it, may be said to be *charged*.

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being gradual, as in a time-piece, a particular effect not announced is predestined to be produced at a distant point of time, the purpose in view, howsoever in other respects susceptible of being diversified, consists in the production of surprise. In this case the expenditure applied to this particular purpose may, as well as the general expenditure, be of the gradual kind. But, generally speaking, it is rather a sudden than a gradual expenditure that is the best adapted to this purpose.

Of the sort of machine, in the construction of which the motion produced by the spring being predestinated, is instantaneous, the purpose, and that a very variable and extensive one, is *the production of surprise.*

Under the denomination of *mischief*, in some shape or other, may be included the only practical purpose to which a machine of this nature, complicated and expensive as it cannot but be, seems likely to be applied:* and for the prevention of any such mischief, divulgation, antecedent to the attempt, divulgation the more extensive the better, affords the only chance which the nature of the case admits of.

Clocks, it is said, have been made, in the instance of each of which, by means of one winding up, the motion has been continued for a twelvemonth; many a one in which, at a predestined time, a door flew open, disclosing some object or objects in motion, or at rest.

The accusation of some individual guilty or innocent; the announcement, true or false, of some catastrophe, natural or supernatural, past or future, affecting this or that individual class, neighbourhood, or whole nation, written in characters of fire; it is only in semi-barbarous society that a contrivance of this sort could be productive of any permanent bad effect. But by the combustion of a quantity of combustible matter, lodged in the machine for that purpose, a conflagration might be produced in any edifice in which, without due examination of its contents, a case containing a machine of this sort, should have been retained.

Under the name of the Torpedo, for the purpose of maritime warfare, in the war now so happily terminated, the Americans employed, or had it in contemplation to employ, a machine for the producing of subaqueous explosion or conflagration. Of a destructive machine of this sort, a time-piece would naturally be a component part.

At the siege of Troy, had this application of the spring to the production of predestinated effects, at predetermined points of time, been known, a destructive machine of this sort, instead of a party of armed men, would have constituted the stuffing of the Trojan horse.

For the purpose of a security against depredation, predestinated destructive movements have been inserted in receptacles destined for the preservation of articles of value against attempts on the part of depredators; a contrivance, for example, whereby, on the opening of the receptacle by any person who is not in the secret, a loaded pistol is discharged. In this case no demand, it is evident, has place for a time-piece. Of the latent motion, by which the purpose is effected, either the expenditure alone, or first the infusion and thereupon the expenditure is performed by the muscular exertion, by which the aperture of the receptacle is effected or attempted. For such a purpose, the spring would probably be found, in every case, a convenient instrument, though cases may be conceded in which it would not be an absolutely indispensable one.

Upon an estimate, if correctly and completely formed, of the effects of both sorts, beneficial and mischievous, in all shapes, expectable from any eventually destructive machine of this description, the probability seems to be that it is on the side of mischief that the balance would be found; and, on this supposition, it would seem that, besides treating all persons knowingly concerned in the fabrication of any such machine, on the footing of co-delinquents in respect of any mischief eventually produced by it, for the purpose of timely prevention, a lesser penalty might be attached to the mere act of him who knowingly, as above, or with just grounds of suspicion before his eyes, shall have engaged or co-operated in the fabrication of it.

In the case of the ball employed in pastime, the lateral injection or impulse is the operation by which the lateral motion is infused; and the motion is instantaneous. *Primum Mobile*, in the case in which the bound is produced by a single fall or drop, the ball itself. *Secundum Mobile*, the earth which thereupon reacts upon it, and drives it up again. *Primum Mobile* in the case in which it is struck, the instrument with which it is struck; or rather, the *Primum Mobile*, by which, in action, that instrument is moved: for example, when it is by human will that the stroke is produced, the muscular fibres, by the shortening of which the stroke is made.

In the case of the ball the whole instrument is, in every part, a spring.

When a spring enters into the composition of another instrument, it has either a single fixed point, or a number of fixed points. Of the latent motion when injected, these fixed points may, for the purpose of nomenclature, be considered as the seats, and then we have single-seated springs and double-seated ones, as in the case of the time-piece spring.

In the case of the common lock-spring, it has but one fixed point: impulse is the operation by which, in this case, the latent motion is infused; this species of spring may be called the single-seated spring.

In the case of the archer's bow, it has two fixed points, both permanent. Distension is the operation by which, in this case, the latent motion is infused.

* Alarm-clocks are innocuous and useful applications of this kind.—*Ed.*

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At the instant preceding that of the expenditure, an additional quantity of latent motion is infused by distension, applied at a third point between the two, and with most advantage exactly in the midway between the two.

Sound is a collateral effect producible, in certain circumstances, by the expenditure of the latent motion of a spring. It results incidentally, and without design, from the use made of an arched bow.

When the spring is applied to the production of musical sounds, this collateral effect becomes the principal one.

In the case of the Jew's harp and the musical pitchfork, the spring is of the single-seated kind.

Not long ago an instrument was constructed, a species of pianoforte, in which, instead of a string, a pitchfork was allotted to each note. No such instrument having come into use, the experiment must have been an unsuccessful one. The inventor was a musician of the name of *Claget*.

In the case of the violin, with its different enlargements,—in the case of the harpsichord and the pianoforte,—the spring is of the double-seated kind. The occasional additional tension is effected either by gradual friction, as in the case of the violin, by impulse of a plectrum passing beyond the string, as in the case of the harpsichord, or by a hooked plectrum, drawing the string and letting it go, as in the case of the harp, the lute, and the guitar, or by a hammer striking against it, and not going beyond it, as in the case of the pianoforte.

In the case of the Æolian harp, the office of an impelling plectrum is performed by the wind. All the strings are all of them tuned to the same note, and the succession of notes is left to Æolus, who in such circumstances is unable to produce any other notes than those of which the combination called the common chord is composed.

In an organ, could a stop exhibiting any pleasing variety of intonation be composed by the application of the principle of the Æolian harp? The air, by the escape of which from the common reservoir such note is formed, suppose it to strike against a string tuned to that same note?

The Pedal spring.—By this appellation may be designated the sort of spring by which a continued motion is rendered capable of being produced by the alternating tread of the human foot. The spring is in this case a *single-seated* one. To the fore end is attached an end of a cord,—by the other end of which motion is given to any system of mechanism to what purpose soever applied. A turning-lathe, diversified according to the infinite diversity of purposes to which this instrument is applicable, presents the application most commonly exemplified. The machine for grinding tools is one of them.

The use of the spring here is only after the fore end of it has been pressed down by the foot by one tread, to bring itself up to its former position, that it may be in readiness, without change of posture, to receive another tread, and so *toties quoties*.

In the action thus carried on by the foot, the force produced by the muscular action receives, or may occasionally be made to receive, more or less of addition from the attraction of gravity operating on the body.

In the case of the carriage-spring for diminishing jolts, the object is not to treasure up or direct motion, but to destroy the effect of it.

Mode in which this effect is produced.—By being communicated along the substance of the spring, the motion produced by the stereoptic effect of the attraction of gravity, is as it were impalpably pulverised. The quantity of matter being the same, the motion is divided into as many motioncules as there are particles of matter in a line measuring the altitude of the fall; and throughout the line it is encumbered by the repulsion of cohesion, by the expenditure of the latent motion infused by itself into this spring, as into a ball, as above.

To the aggregate of the exemplifications made, and capable of being made, to practical use, of the instrument of reactive motion called the *Spring*, the application of the bifurcately exhaustive mode of division may, if the mode should afford a promise of being useful, be made by any student by whom any such promise shall have been desired: and of such a labour the discovery of this or that new and useful application of the instrument might possibly be the fruit. As to the author of these pages, having already travelled in this track to a length sufficient for marking out the course to any such person as may happen to feel inclined to pursue it further, to their industry he leaves it.

It must be for *Technology*, and not here that the application of the *generalisative* mode of considering the subject must be reserved.

XII. *Eclectico-spastic* Source.

A source of changes infinitely diversified is the terminal cause which, from British Chemists, received the name of *Elective Attraction*, an expressive and correctly designative name; in the place of which the appellation *affinity* has, not only by French Chemists, but to a great degree even by British, been employed.*

* [*Affinity.*] Unhappily chosen surely, was this appellation. Instead of being expressive, (so far from being characteristic,) it seems to be not merely *inexpressive* but *misexpressive*. 1. In other cases, in the only cases which, when application of it to this purpose was first made, could have been in view, *affinity* was employed to designate the bond of connexion which has place amongst members of the same family, and, as such, designated by one common name. According to this analogy, all acids, for example, being of the same family, and designated by one common name, it is amongst these that affinity should be said to have place: amongst all these, saline bodies, how great soever may be their number; and so in regard to alkalies; and so

Limited as is the field of action belonging to this source, confined within limits not distinguishable from those by which the field of attraction of cohesion is circumscribed,—limited, and that to such a degree as to be manifestly incapable of affording, on any occasion, a quantity of motion large enough to be employed to a mechanical purpose, to any advantage, still in a catalogue all-comprehensive of sources of motion, it is not the less strictly entitled to a place.

To enable it to match with the others, it will require a Greek appellation, *eclectic*, suppose, or *eclectico-spastic*, be that name.

XIII. In some instances, when, upon the application of caloric, a body is made to pass out of the solid into the liquid form, in one word, upon its *melting*, say rather (to distinguish this mode of liquefaction from solution in a body already in the liquid form) on its being smelted, its dimensions are on all sides contracted, and this without any such change in its composition as that which has for its cause the species of attraction called *elective attraction*, as above. But, without intestine motion in some shape or other, no such change, it is evident, can take place.

Of this motion, the result being that, upon the whole, the particles of the body are nearer than they were before, attraction, and not repulsion, is, it should seem, the head to which it must be referred.* Texigenous, or, for shortness, *tictic*, present themselves as the names by either of which, if the word (idea) be put into a Greek dress, this source of motion may be designated.

XIV. In some instances the like contraction is the result, when, upon the expulsion or absorption of caloric, the body passes out of the liquid into the solid form. For designating the source of the motion which has place in this case, the appellation *Stereosigenous*, or *Stereotic*, might, with corresponding propriety, be employed.

In the opposite direction, viz. *expansion*, very considerable has been the effect produced by or on the passing of a body out of the liquid into the solid form. On the freezing of an enclosed mass of water, a thick mass of iron, in the form of a bomb-shell, has been burst.—This, for curiosity. Applied to fissures, for the purpose of detaching smaller pieces from the huge masses of stone, so denominated, motion from this source has been employed in practice in the character of an economical substitute to mechanical fissures. Thus much for illustration in this place. But, as repulsion, rather than attraction, seems to be the *genus* to which this effect properly belongs, it is under that head alone that its proper place will be to be found.

The most copious and efficient of all sources from which it is in the power of man to derive any quantity of motion, for which he has a demand, is that which has place, when in the instance of *water*, a mass of water is made to pass out of the liquid into the gaseous or pneumatic state. In the word pneumatic, or rather pneumatistic, we have, accordingly, an epithet by which this source of motion may be designated. But *repulsion* and not *attraction* is the genus to which, in this as in the last-mentioned case, the source of motion here in question seems properly to belong.

When once, by the passing of a body out of the liquid into the gaseous state, in a confined space, a quantity of motion has been generated, a correspondent and equal quantity of motion may be generated, if, in the same confined space, the same mass may be made to pass back again out of the gaseous into the liquid state. If, for designating the source of the motion which has place in the case last mentioned the term pneumatistic be employed, for the designation of that which has place in this present case, some such term as anapneumatistic or catapneumatistic might be employed.

But, to the head or genus here in question, viz. *attraction*, neither can this source, any more than that other, be referred. But for the motion which immediately precedes this recurrent motion would not have place; and when it does take place, it is not in any local and intestine attraction, but only in the cessation of the intestine repulsion, and the consequent sole dominion of the universally acting attraction—the attraction of *gravity*, that it has its nominal cause.

To no one body or assemblage of bodies can *change* of any sort take place, but in some mass of matter or other, in some direction or other, motion *must* take place. In the case of vegetation those changes take place, by which a small seed is converted into a lofty tree. Narrow as is the field of these motions at each given instant, yet, by means of them, effects have been produced similar to, and not less than those already spoken of, as producible by the conversion of a mass of water from the liquid into the solid state. By the progress of a mass of matter, with the requisite accessions, from the state of the small seed into the state

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as between one acid, or all acids, on one part, and an alkali, or all alkalies, on the other.

2. In this case, for employing the term *attraction*, the same reason has place as in any of those other cases; by the term, *electric attraction*, this analogy is expressed. By the term *affinity*, if the word be used in those other cases, or any of them, it is virtually disaffirmed.

3. By the epithet *elective*, intimation is given of those preferences: that prodigiously complicated system of preferences, as between element and element, by which this species of relation is so conspicuously distinguished. Of this system, by the word affinity, not any the slightest intimation is conveyed.

* In a still greater degree this contraction takes place in several instances in the case of solution as just explained; but being smelted, what is it but being dissolved in caloric?

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of the tree, fissures and separations have been made, not only in artificial masses of solid matter called *walls*, but in the natural ones called rocks.

Of the motion thus produced it seems difficult, if not impossible, to say in what proportion, if in any, it has attraction, and in what, if in any, it has repulsion for its nominal source or nominal cause.

To whichsoever of these two heads the cause here in question may be deemed to belong, or *phytobiogenous*, *emphyteutic*, present themselves as names, by the one or the other of which it may be designated.

Thus much as to that species of life which is considered and spoken of as having place in the case of vegetation.

Over and above these motions, of which so many exertions of the faculty of the will are the continually and universally experienced sources, there are others, viz. those on which the continuance of life more immediately and essentially depends, in the production of which the will bears no part.

In this case it seems altogether as difficult, if not impracticable as in any of the preceding ones, to say in what proportion, if in any, to attraction, and in what, if in any, to repulsion, the motions which in such infinite variety, as well as profound obscurity, have place, are referable. Whether it be referable to the one, to the other, or to both, *epizoic* or *zoobiogenous* present two adjective denominations, by the one or the other, or by both of which, it may, for the purpose of matching with *emphyteutic* or *phytobiogenous*, be designated. With the nominal source above designated by the term eclectico-spastic, or elective attraction, a source productive of effects so conspicuously different can scarcely be considered as identical; but to that source it seems to bear a closer analogy than to any others that have been, or to any that remain to be, brought to view.

XV. *Economistic* Source.

Magnum vectigal est parsimonia,—Economy is itself a great revenue,—was the saying of a Roman monarch, whose principles in this respect might, with so much advantage to subjects, be adopted by so many other sovereigns.

To motion, considered as a source of mechanic power,—to motion, applied to the humble purposes of mechanics, it may be applied with no less propriety than to the purposes of government.

In this way, in several instances, it has been known to be applied; and the ulterior instances in which it is capable of being applied with advantage, but in which, for want of being present to the mind, it has failed of being applied, are, in number and variety, believed not to be inconsiderable.

It consists in watching for and applying to use all such quantity of motion, and all capacity for affording motion, as, within the reach of the person in question, (afforded, either by the spontaneously exerted powers of nature, or by human industry, in the case where, in pursuit of other objects, it is occupied in giving direction to the powers of nature,) is obtainable from any of the original sources above brought to view. In it may accordingly be seen,—in the field of possibility, though not in the field of actual use,—a branch corresponding to each one of all these several original sources.

By that source of motion which is afforded by the attraction of gravity, is afforded, as will soon be seen, the most considerable part of the field in which economy can be employed in this shape.

On a slight glance at the several classes on that list, it will be evident that the *Stereopiptic*, the *Hydropiptic*, and the *Thelematic*, are the only ones from which, under the head of this source of motion, unless the *Selenic* should be considered as an exemplification of it, any considerable portion of practical use promises ever to be derived.

Of the uses derivable in this shape from falling water and from wind, every one is sufficiently aware.

Of an occasional use capable of being made of the *Stereopiptic* source, the following mementos may afford an exemplification :—

1. When from a quarry of any kind, situated on an eminence, you are conveying its contents, if circumstances be favourable, so order matters that, whatsoever sort of carriage is employed, the descent of one carriage, when loaded, shall, without the employment of any other force, produce the ascent of an empty or less loaded one.

For this purpose, all you have to do is to fix in the middle of the breadth of the road a post or a series of posts, furnished with horizontal pulleys, at the elevation of the line of draught. In these pulleys plays a rope, attached at one end to the front of the empty carriage, which is to be drawn up hill, and the other end to the back of the loaded carriage, which, by the force of gravity, is to be suffered to run down hill.

When circumstances admit, this expedient, it is believed, is in common, though probably not in universal, use.

2. When, up one and the same ascent, you have occasion to cause to be drawn a loaded carriage, such a number of times that the saving of labour made in this way will be sufficient to compensate the quantity of labour, and wear and tear of the materials necessary to the construction of an apparatus similar to the above, instead of setting your man or men, beast or beasts of draught, to walk up the slope, set them to walk down it; whereupon, by means of the rope playing on the pulley as they descend, the loaded carriage will ascend. In this way the weight will be acting in co-operation with, instead of opposition to, the muscular force employed.

In a mine one bucket is, doubtless, com-

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monly on the above principle, employed in the drawing up an unloaded or less loaded one.*

Supposing any the least attention applied to the establishing of a balance between the descending and the ascending weights, a loaded carriage could, in this way, be conveyed up a declivity, beyond comparison steeper than any up which it would be possible for animals of draught to draw a carriage, even in an unloaded state.

3. When for any economical purpose, within a limited space, such as that of a mine, a manufactory, or ship, or an edifice during the process of erection, men are in the habit of ascending and descending, and at the same time of carrying to the superior level masses of considerable weight, the weight of whatsoever persons or things have to descend may, in the same way, be employed to advantage: the weight to be raised being by means of a rope, moving on a pulley, fixed above the highest point, up to which it is proposed to convey any weight: and the saving thus produced in the article of labour, will be equal to the labour of conveying to the superior spot in question, in each instance, a quantity of matter equal in weight to that the descent of which is connected with the ascent of the antagonizing mass; deducting that which corresponds to the quantity lost by friction.

Analagous to this is the expedient of saving, for the purpose of thus serving in the aggregate, in the character of a *primum mobile*, portions of water too minute to be separately applicable to any serviceable purpose. They are conducted into a bucket, which, when a quantity sufficient for the purpose has been received into it, descends, and, in its descent, raises an empty one.

The several known Sources of Motion exhibited in systematic order, in the bifurcate and exhaustive mode of division and arrangement.

The remaining task consists in the ranging these several distinguishable sources of motion in systematic order, in such sort that it may be seen in what particulars they respectively agree, and in what particulars they differ.

Archaic or original, and *Antactic* or non-original.—Applied to the word designative of *source*, the adjunct original disaffirms the generation of motion from any other source as a necessary condition: by the adjunct antastic or reactive it is affirmed; and from whatsoever original source the original first motion be derived, the antastic is equally capable of manifesting itself. Being exemplified in the sort of instrument or mechanical power called in English a *Spring*, the antastic or reactive source of motion may also be termed the *Spring source*.

Purely Physical or *Physiurgic*; purely *Psychical* or *Thelematic*; and mixed *Physico-psychical*, *Anthropophysiurgic* or *Psychothelematic*. Under one or other of these heads will all original sources of motion, it is believed, be found to be comprehended.

Geogenous, *Esoteric*, or *Indigenous*; and *Exogenous*, or *Exoteric*; *indigenous* with reference to the earth, the planet in which the motion in question is produced. To the head of *Exogenous (Exoteric,)* belongs the source above designated by the name of Selenic or Lunar.

* In the case of the streets, for example, which run at right angles between the river Thames and the Strand, if, during a certain part of the twenty-four hours, the exclusive use of the street could be secured to the coal-dealers, by whose carts coals are conveyed from the river to their destination, in the several adjacent streets and roads of the metropolis and its neighbourhood, considerable saving in the article of horses might thus, it is supposed, be made. In the way of apparatus, the rope and pulley excepted, nothing more would be necessary than a line of strong uprights, in number proportioned to the length of the street, each of which, stationed in the middle of its breadth, and turning on a hinge, might, in a direction parallel to its length, be lowered and placed in a horizontal position, on the expiration of the portion of the twenty-four hours allotted to this service.

Of these coal-carts, every one that went up full, would have to come down empty: here, then, would be an occasion in which the draught upwards might have for its assistance, if time could be made to suit, not only the weight of such horses, as belonging to that same carriage had been sent up the declivity for the purpose of drawing it up as they descended, but the weight of an empty and returning carriage, with the horses employed in drawing it.

So in regard to other goods at large, generally speaking, and bating the effect of any particular goods by which the natural equality between the weight of goods exported from, and that of goods imported to, a mass of water used for conveyance, may happen to be disturbed, for every ton of goods conveyed up the declivity, there would be a ton of other goods conveyed down it; and thus to the assistance afforded by the descending carriages would be added that afforded by the descending goods. In this way, then, supposing the circumstances to admit of the requisite agreement, amongst the several proprietors of goods, and other parties interested, calculation would soon show the multitude of horses which might by this means be saved.

In the case where no animal is employed in the draught, it has not unfrequently happened to me to be an eye-witness of the exemplification of this principle of economy. In the case where, in the production of this same effect, animal draught is employed, it has never happened to me to see or hear of any instance of its being put to use in this country. In Russia, in the year 1756, under the direction of my brother, Sir Samuel Bentham, with whom, for anything that either of us know or knew to the contrary, the idea had originated, I saw it put in practice; and it was pleasing to observe in how high a degree, while the quantity of matter conveyed up the declivity was increased, the toil of the horses was diminished.

About the year 1793, I remember his communicating the idea, by word of mouth, to the intelligent and useful servant of the public, Mr Samuel More, then Secretary to the Society of Arts; but I have not heard that, in practice, any application has been ever made of it.

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In respect of texture, as depending upon, and constituted by, the result of the conflict betwixt or amongst the principles of internal attraction and repulsion, all matter to which we have access, as far as we are able to judge, is at all times in one or other of these states: viz. 1. the solid; 2. the liquid; 3. the gaseous state; and the liquid and the gaseous states are included under one common denomination, viz. the fluid state.

To each of these three states corresponds a natural (purely physical) source of motion: to the solid state, the *Stereopiptic;* to the liquid, the *Hydropiptic;* to the gaseous, the *Aerogenous.* In as far as it is set at work simply by the hand of nature, without assistance or direction given by the hand of man, it may, to distinguish it from the case in which the hand of man is occupied in the giving birth or direction to it, be termed æropnutic, *i. e.* a source of motion afforded by the wind.

Delo-diathetic or *Phanero-diathetic;* and *Crypto-diathetic.* Under one or other of these appellatives may every source of motion, which belongs to the Psychico-physical class, be designated. Under the head of *Delo-diathetic* or *Phanero-diathetic,* may be arranged those sources of motion which are produced by the powers of human invention, under the direction of human will, operating upon any one or more of the natural sources of motion above enumerated: in all which cases the motion is the result of those powers with which, at all times, and in his rudest state, man has been familiarly acquainted: viz. the powers corresponding to the different states, in all of which, as above, all matter is apt to place itself, or found capable of being placed.

Of that same Psychico-physical class of sources of motion, under the *Crypturgic* or *Crypto-diathetic* branch, are here arranged those sources of motion which correspond to so many different powers or sources of motion with which, in comparison with that which we have with those others, our acquaintance is of recent date, and, in respect of extent and clearness of comprehension, is still comparatively imperfect. Of these, the list will presently be brought to view. There are—1. The *Magnetic* or *Magnetico-spastic.* 2. The *Electric* or *Electrico-spastic.* 3. The *Galvanic* or *Galvanico-spastic.*

In this case, the source from which the division is drawn is not any property belonging to the objects themselves, but the relations which the present state of our own power bear to them respectively.

On this occasion the natural philosopher, in his character of chemist employed in the service of the mechanician, is glad to have recourse to the same shift as that which, in the instance of the class *Cryptogamia,* was employed by the natural philosopher, acting in the character of botanist,—making the most of everything, and deriving profit to science, in some sort, even from his own ignorance.

In the case in which the *Crypto-diathetic* branch of the Psychico-physical branch of the sources of motion is employed, the state in which the matter or matters in question is employed in the character in question, viz. that of a source of motion, is either a state in which at the time, during which they are put in action, they had already been placed by the hand of *Nature;* or a state in which, for the purpose, they are placed by the hand of *Art:* in the first case, is that source of motion for the designation of which the appellation of *Barometrical* is here employed: in the other, are the two sources of motion for the designation of which the two appellations *Parallactico-sunorotic* and *Aplo-sunorotic* are here employed. Parallactico-syncrotic, when, as in the instance of the *water,* which, in the case of the steam-engine, is the *primum mobile* employed,—to produce the effect ultimately desired, it is necessary that the same portion of matter should, a number of times successively, pass alternately from the liquid to the gaseous state, and *vice versâ:* aplo-syncrotic, when to produce the alternate effect ultimately desired, no more than one such transition, viz. that from the liquid to the gaseous state, is necessary: which transition is all that the nature of the species of matter in question admits of.

In the first case, for the purpose of their being placed in, and forming part of, a systematic sketch, *Ametamorphotic;* in the other case, *Metamorphotic,* is the appellation by which these several branches of the Psychico-physical division of the aggregate system of sources of motion may be designated.

1. The magnetic or magnetico-spastic; 2. the electric or electrico-spastic; 3. the galvanic or galvanico-spastic:—these, of each of which an explanation has been given above, may be considered as so many sources comprehended under the class for the designation of which the terms *Crypturgic* and *Cryptodiathetic* have been employed: itself, as above, a branch of the psychico-physical class.

These last, and themselves undivided classes or sources, three in number, are placed upon a one line as they present themselves without any attempt to apply to them the bifurcate mode of division. Their relations to one another are as yet too little understood to admit of their being thus put under subjection by the arranging hand.

As to that source of motion which, under the name of the Economistic, has been brought to view, by the account which on that same occasion was given of it, it is represented as not to be in itself a distinct one; distinct from all or any of the others. It cannot, therefore, without impropriety, be brought under any such plan of division as the one here attempted to be exemplified. But the task of bringing it to view, for which purpose it was necessary that a distinct name should be given to it, presenting itself as one that might be productive of practical advantage, it is therefore, in

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the character of an appendage, placed at the end of the list of the distinguishable sources of motion, on which the bifurcate and exhaustive mode of division has here been, in the least imperfect manner which the power of the workman admitted of, exemplified.

By the above arrangements, the conception formed of the matters contained in them was in the author's own instance facilitated, and, as it seemed to him, clarified; in as far as in the instance of any other minds the like good effects shall have been produced, payment for the labour thus expended will have been made.

Detecting, and, if practicable, remedying the imperfections from which it was not in the author's power, at least with the quantity of time which he could afford to allow to the task, to clear it, might afford an exercise, and, it is imagined, one not altogether unuseful, to the juvenile vigour of the studious mind.

If from the labour thus bestowed in this field, any fruit should come to be reaped by any other mind, it may be referred to the improvement made upon an attempt to exhibit, in the form of a systematic tree, such as is here subjoined,* the arrangement made in his Hermes, by James Harris, of the grammatical parts of speech, and of the view thereby taken of the delusions into which, by his devotion to the ancients, the author, with all his ingenuity, was on that occasion found to have been led.†

MECHANICAL POWERS.

On this ulterior subject, a few loose hints are all that the writer can at present afford,—all that he can hope to find the readers, to whom he looks, disposed, on this occasion, to bestow any further portion of their notice.

To reduce to one and the same expression the description of the several sorts of instruments, which are in use to be included under the common name of the mechanical powers, seems to have been an object of desire, and, in some respects, of endeavour, with the authors of institutional works.

In any such desire, in any such endeavour, at least the notion of the practicability of the work is included.

That it may be practicable to reduce to a single expression some certain property, or certain properties common to all these several instruments, is a proposition which I see no reason, nor feel any disposition, to dispute.

But it is only in respect of the *uses* which they are capable of being put to, that for any purpose but that of barren speculation and solitary amusement or curiosity, they have any of them any claim to the attention of the ingenious, or any other part of mankind.

Now, howsoever it may be in regard to this or that speculative property, in regard to the practical applications made of them—those applications in respect of which alone they can lay any claim to the property of being of use—in reference solely to this property, what may be asserted with confidence is—that they are not capable of being reduced to any such common denomination.

Instruments for gaining force, at the expense of velocity, or velocity at the expense of force, were this a property belonging to all of them, the problem of reducing to one expression the advantage gained by them, might be a not unsolvable one. But out of the six or seven, it is to three only that this common property can justly be ascribed, viz. the lever, the axis in peritrochio, and the pulley or combination of pulleys: to the inclined plane, the screw, and the wedge, it is not applicable. In all these instances, the use derived from the instrument in practice depends upon other sources: upon properties in which the three before-mentioned powers do not any of them partake.

In the case of the lever, the axis in peritrochio and the pulley, the power of the machine finds not an assistance, but, in so far as it operates an impediment; whereas, in the case of the screw and the wedge, were it not for the power of friction, the effect aimed at would not, generally speaking, be produced.

Of the screw, though it certainly may be and actually is employed as well as the lever, axis in peritrochio, and pulley in the raising of weights, yet, the use to which it is applied with much greater frequency, and with a correspondent amount of advantage is that of *connexion*: binding for an infinity of different purposes, two or more masses of matter in a solid form into one.

So again the inclined plane. It is not for gaining force at the expense of velocity or velocity at the expense of force, that the instrument thus denominated is commonly, if ever, applied: it is for modifying direction; it is for producing in a certain direction certain results, which but for this instrument could not, in certain circumstances, by all the force obtainable by any of these instruments, be obtained.

Suppose a natural rock, or an artificial erection, having for its altitude that of one of the Egyptian pyramids, and for the boundaries of its upper surface, as well of those of its under surface, those of that same pyramid. By the application of force on one side of the parallelipedon with all the levers, wheels, and pulleys that could be collected, a man would not communicate the power of either himself mounting to the top of it, or causing a block of stone so to

* This tree has not been found among the MSS.

† Viz. the adverb represented as having an import distinct from that of the other parts of speech, and thereby from that of the preposition, that of the noun substantive, and that of the noun or pronoun adjective: whereas, in every case the import of it is resolvable into the several imports of those three parts of speech taken together: take, for example,

then, that is, *at that time;*
there, i. e. *in that place;*
thus, i. e. *in this manner.*

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do. Applying an inclined plane to it, making an angle coinciding with any one of the angles made with its base, and the plane at the vertex of the pyramid by one of its present sides, the man may mount upon it, or the block of stone may be drawn up to it.

On this head the theoretical conclusion is, that in pursuing without sufficient scrutiny, and hence with too undeviating an adherence, the path chalked out by the ancients, and by them pointed out by the collective appellation of the mechanical powers,—the five or the six mechanical powers,—the progress of science has in this part of the field, as in so many others, been retarded.

So much for the theoretical conclusion: and the practical which corresponds to it, and is deduced from it, is, that some other principle of arrangement should be looked out for, and that a more comprehensive one—a principle which will afford an opportunity of placing upon the list many species of instruments which, though actually invented and in use, are not as yet put upon the list; many instruments actually known, and known to be in use, and, peradventure, other instruments which by a more correct and complete conception of the subject may continually be brought to light. What is the principle? It consists in substituting to the present arrangement, an arrangement which shall bear reference to the several distinguishable purposes or uses, for which mechanical contrivance is in demand; in one word, in substituting the idea of uses to that of powers. Gaining force at the expense of velocity,—gaining velocity at the expense of force,—are but two of those purposes,—are but two items in an indefinitely, in an hitherto indeterminately ample catalogue; changing direction is a third; forming connexion is a fourth; dissolving connexion is a fifth; and so on. But here, on pain of losing myself altogether in a field foreign to the present purpose, I must make an end.

PERPETUAL MOTION.

In the history of the generation and extinction of the birth and death of motion, is involved the question of perpetual motion.

One species of motion there is, which, as far as we can judge, may, with good reason, be pronounced perpetual. It is that by which the bodies which compose the perceptible part of the universe, are kept whirling in their orbits. Perpetual, as far as we can judge, it must be presumed to be. Why? Because there can be discerned no cause, the operation of which should tend to make it cease. This, however, supposes the spaces in which they respectively move to be so many vacuums: for suppose them occupied with matter in any shape,—in the shape of a gas how rare soever,—in the resistance opposed by friction, by the gaseous repulsion of the particles of which it is composed, in that resistance, how distant soever the term may be, may be seen a cause fully adequate to the production of its effect.

In the instance of the stereopiptic source, numerous, it is believed, have been the contrivances produced by the hope of converting a source of short-lived motion into a perpetual one.

One consisted of a wheel, in which, along a spiral channel, a quantity of mercury was to find its way in its fall from the axis to the circumference; the longer the semi-diameter of the wheel, the longer the lever with which, when arrived at the circumference, the mass of mercury would act upon any body situated nearer to the centre. Make the diameter of your wheel *infinite*, and the force you will thus acquire will be the half of an infinite force. But, long before you had been at the trouble of giving to it any such inconvenient extent, you would have acquired force enough to pump up into the annular reservoir contiguous to the axle-tree a supply of mercury sufficient to continue the motion, and thus your motion would be a perpetual one. Somewhat in this strain seems to have been the reasoning that gave birth to this contrivance.

By the time it had reached the circumference, subtraction made of the force destroyed by friction, the mercury would have produced an effect equal to the effect produced by the same mass of mercury in falling from its position near the axis to its position near the circumference, without the trouble of taking any such sweep.

In the course of its transit from the one end of the spiral to the other, it would have to make a number of descents, as also a number of ascents, proportioned to the number of convolutions or threads in the spiral: the descents would be so many motions having for their adequate cause the attraction of gravity; the ascents would be so many motions, none of which would have any adequate cause; friction sufficing of itself to prevent the cause which in the preceding descent they respectively had from being an adequate one.

All perpetual motions having for their source the attraction of gravity, would, it is believed, be found resolvable into this mercurial one.

Some five and forty years ago, Dr Kenrick, most known by an attack made by him on Dr Johnson the Great, in an 8vo volume entituled *Lexiphonis*, took in hand the subject of the *perpetual motion*, and on this subject read, and afterwards published, a few lectures of which the effect, if any, was to render the subject somewhat more obscure than he found it. The object was to render probable the possibility of the existence of this rival of the philosopher's stone. One of the proofs consisted in some mention that was made of a certain mysterious wheel invented and manufactured by a person of the name of *Orphyonis*. By this wheel great were the wonders wrought; but, unhappily, the instrument being with prudent caution kept constantly enclosed in an

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opaque and well-locked box, the invention died with the inventor, and was thus lost for ever to the world.

Not being known to the world by any other work, the inventor, Orphyonis, has somewhat the air of having been in the way of eponthesis, derived from *Orpheus*.

If any such wheel was ever made, it may be affirmed, without much danger of mistake, that the principle upon which it was constructed, was either the mercurial principle just explained, or the magnetic, of which the idea has been already given.*

By the *perpetual motion* is designated a motion, which, how ill-grounded soever, has on various occasions been espoused, by men not altogether unconversant either with the practice or with the principles of mechanics. On this part of the field, one true use of science is to render clear, and hold up to view the delusiveness of all expectations entertained on this ground, and thereby prevent the disappointments and pecuniary losses with which all such expectations can scarcely in the event of their being acted upon fail of being productive.

For any motion of any mass or masses of matter, situated within the reach of human agency, to be in the *literal* import of the word *perpetual*, it would require that the masses of matter in question should be in every part indestructible, and the particles of which they are composed, unsusceptible of being, any one of them, by means of the motion or otherwise, separated from any other. A notion to any such effect being in opposition to universal and continual observation and experience, can scarcely be supposed to have ever found admittance into any human breast.

But, independently of the operation of any such manifestly and universally operating cause, by the word *friction* as above explained, is moreover designated a cause, in which no imaginable motion, from whichsoever of the above sources proceeding, can fail of experiencing, within a very short space of time, *unless renewed*, its inevitable death.

But in any case, in which the motion can be said to be *renewed*, the motion, when the case is more clearly looked into, will be seen not to be one and the same: it is a continually successive creation of fresh motions: viz. in the case of falling water, falling earth, or wind, the motions of fresh and fresh parcels of matter, receiving motion one after another, though in the same direction; in the case of motion produced by muscular exertion, fresh and fresh exertions of the *will*, and *contraction* of the same or other *muscles*, produced in consequence.

If in the import of the words *perpetual motion*, were included the idea of any internal source of motion, by which different particles of matter, after having in any never-interrupted series been put *successively* in motion, were so to continue without end, then and in such case there would at all times be as many *perpetual motions* as there are distinguishable purely physical sources of motion (meaning individual sources, not *species* of sources) operating and producing motion, as above. But, in no one of the cases, in which a perpetual motion has been said to be invented, or said to be capable of being invented, does any such state of things appear to have been in view.

* At that time, and for a good many years afterwards, there existed a sort of philosophical club, composed at first of but a small number of members, which, at different periods of its existence went, I believe, by different names, two or more, no one of which is at present in my memory. At that time, the number of its members was small, but antecedently to its extinction, its members, as well as its celebrity, had received considerable increase. Sir Joseph Banks, the late Dr Solander, John Hunter the surgeon, Myln the architect, the still existing and celebrated Mr Richard Lovel Edgeworth, Dr George Fordyce the physician, Jesse Ramsden the optician, Conyers the celebrated watchmaker and writer on that subject, another Conyers, Arabic Professor somewhere in Scotland, and perhaps one or two more members. I had myself, at that time, the honour of being, in this way, an associate of so many ingenious and illustrious men, together with the shame of being a very ignorant and altogether an unprofitable one. Curiosity drew to these lectures of Dr Kenrick several members of that club: two whom I recollect as being of the number, were Mr Edgeworth and the watchmaking Conyers. It was by Dr Fordyce that I was introduced.

APPENDIX.—No. VI.

SKETCH OF THE FIELD OF TECHNOLOGY.

To a course such as that here proposed, a not unapt conclusion may, it should seem, be afforded by a view of what has been termed *Technology*,—General Technology,—the aggregate body of the several sorts of manual operations directed to the purposes of art, and having, for their common and ultimate end, the production and preparation of the several necessaries and conveniences of life.

Of a view of this art, the amusiveness no less than the instructiveness, will receive no small increase, if to the exhibitive description, accompanied as far as may be, with the exhibition of the instruments and operations themselves, be added an indication of the rationale of the several operations.

By the *rationale* is here meant, an indication of the end most immediately in view, and the considerations by which, as between instrument and instrument, or operation and operation, the choice appears to have been determined.

By a familiar example, what is here meant will, it is believed, be rendered sufficiently apparent. For the purpose of making holes destined to give admission to threads employed

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for the purpose of junction, the instrument employed by the tailor is the needle; that employed by the shoemaker, the awl. When the needle is employed, the work, it is evident, may be made to go on with a degree of rapidity much beyond any that can be given to it by the awl. Why, then, in the case of shoemaker's work, employ the awl?—Answer. Because the habiliment fastened by the shoemaker,—having for its principal object the exclusion of water, to the action of which it is continually exposed, at the same time that the material is of that sort which, when a hole has been made in it, has but little tendency to fill up the vacuity,—could not, if the needle were employed, be made to answer the intended purpose. The needle is capable of admitting the thread only by means of a slit called the eye, made at the thickest end of the needle into which the thread is passed, and, therefore doubled. The needle is a cone, of which the transverse section is a circle. The thread, without being in some part of its length double, cannot pass through the hole made by the needle, without passing in the form of two cylinders enclosed, both of them within the circle formed by the above-mentioned section of the needle. But, in this way, notwithstanding whatsoever elasticity may happen to be possessed by the substance into which the holes are made, it cannot be but that a part, and that a very considerable one, of the circle, will remain unfilled up; and, at this part, if the habiliment be a shoe and the material leather, the water will gain entrance. On the other hand, when, for making the holes, the instrument employed is the awl, the thread is not attached to it. The thread is a strip of leather, the section of which is a square, a form by which the hole will be more exactly filled up than by any other that could be given to it. Of this square, the central part is occupied by a hog's bristle, a cylinder, which being comparatively inflexible, and of a diameter smaller than that of the hole destined for the strip of leather in which it is imbedded; a ready admission will be obtained into the hole as soon as the awl is drawn out of it.

For the purpose of such a conspectus, a work of indubitable use, would be a logical, *i. e.* an analytical arrangement of the several manual operations, employed and employable, for the purposes of the several arts considered on this occasion, and for this purpose, in conjunction: say, therefore, *of art in general.*

To any person by whom a work of this sort should be undertaken, very useful hints would be found afforded by a work of Bishop Wilkins. As a copy of that most ingenious work is not obtainable but by accident, an extract from it, containing as much as seemed applicable to the purpose in question, will be found in the Appendix to this present Essay.*

In the works of recent naturalists, chemists, and nosologists, and, in particular, in the Philosophia Botannica of Linnæus, the father, as he may be termed, of Somatological tactics, much useful instruction, many excellent patterns may be found applicable to such a work. That, in such a work, these patterns or standards of reference, cannot in any part be closely copied, will be evident enough; but that, by the aid of analogy, instruction in abundance will be derivable from them, will be found equally indubitable.

From the consideration of the purpose, together with other considerations subordinate to that leading one, mechanical instruments and operations, and their results or products, may, as well as plants or other natural bodies, be arranged into classes; those classes divided into orders, and sub-divided into genera and species; between orders and genera, other divisions, if found necessary, being interposed; and to these several aggregates, thus continued one within another, names taken for distinction sake, from one or other of the dead languages, may be attached.

Say, for instance, name of one of the genera of instruments, *Terebra*—instruments employed for the boring of holes. Species—1, the awl; 2, the gimblet; 3, the augur; 4, the whimble, &c.

Name of another of the genera, CLAVI—instruments employed for the effecting a connexion between two or more substances of a rigid texture, and for that purpose to remain inserted partly in one and partly in another. 1, The pin; 2, the bolt; 3, the nail; 4, the trenail; 5, the screwing nail, called for shortness, the screw.

Neither as being, in as far as it goes, complete, nor as being the most apt, that the nature of the case admits of; nor in any such hope as that of its being found to approach to perfection in either of these particulars, is this specimen brought to view; the object of it is merely to afford a general idea of the principles upon which it is proposed that it shall be formed.†

Not only to instruction, but moreover to improvement, to practical improvement, will be the assistances afforded by a systematical, or say an analytical, arrangement of this kind. Taking throughout, for its leading principle, the object or end in view, it will form all along, as the work proceeds, a bond of connexion, and, as it were, a channel of intercourse between art and art; artists of all sorts, how different soever the results and products of their respective arts, may thus receive instruction from each other's practice; each may thus find his mind expanded—expanded in that direction in which, being prepared for it by antecedent practice, expansion will be most easy and pleasant.

For a work of this sort, in the French,

* See Appendix, No. VII.

† See Appendix, No. VII.

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"Descriptions des Arts et Metiers,"* materials will be found in abundance. But, conducted upon the systematic and all-comprehensive plan above brought to view, it will possess a degree of utility beyond any to which that work so much as aimed. Of that work, the compilers were philosophers, and in that character, something in this way might not unnaturally have been looked for at their hands. But of so vast and diversified an aggregate of materials, the collection and the arrangement—the arrangement in logical order, such as is here in question, was too much to look for, not only from the same hands, but, perhaps, from the same half century. In a case such as this, the particulars required had not only to be collected upon a most ample scale, but compared and confronted, one with another, in an infinity of directions before the work of classification could be entered upon with any very promising prospect of lasting use.

Bulky to a degree of unwieldiness is that justly celebrated work.† But, even with those ample additions which, by English practice, might doubtless be afforded to the stock of the materials, it follows not that, in point of bulk, a systematical work of the kind here proposed need, by a great length, approach to the bulk of that vast and elaborate performance. By apt aggregations, infinite is the number of particulars which in such a case may be found superseded. In different trades, an instrument which, in all these several instances, is of precisely the same use; an operation which, in all of them, is of precisely the same nature, may stand designated by so many different names.

For a course of Chrestomathic instruction, as here proposed, a work of this nature would form a necessary text-book. By the indication of such a work in the character of a requisite, the possibility of commencing such a course, may seem, at first view, to be thrown forward to an immeasurable distance.

1. But, in the first place, it is not till the very end of the proposed Chrestomathic course—viz., say for seven or eight years—that any such particular course is so much as proposed to be delivered.

2. In the next place, for a commencement, an extempore work, very far not only from the utmost attainable perfection, but from the degree of perfection of which an idea can be formed at present, will be of indubitable use, and as such, presents an undeniable claim to favourable acceptance. Be it ever so little, ever so imperfect, whatsoever will in this way have been done, will be so much more than will ever have been done before.

3. In the third place, by any one by whom, to the following sketch by the ingenious Bishop, a moderate share of attention will, in this case, be bestowed, no inconsiderable portion of that appearance of extraordinary difficulty, which the subject may, at first view, have presented, will, it is believed, be seen to vanish.

* Descriptions des Arts et Metiers faites ou approuvées, par Messieurs de l'Academie Royale des Sciences.

† Nine vols. folio.—*Ed.*

APPENDIX.—No. VII.

Hints towards a system and course of Technology, from Bishop Wilkins' Logical work, published by the Royal Society, A° 1668, under the title of "An Essay towards a Real Character, and a Philosophical Language."—Pp. 243–248.

In the character of a practical project fit for use, this work, with all its ingenuity, failed in its design: being written before the discoveries made in the field of Pscychology by Locke.

It seems not likely that, by the formation of a new language, the difficulties and inconveniences attendant on the use of the collection of signs at present employed in the registration and communication of ideas would be diminished. In no other way than through the medium of some existing language, with which he is already acquainted, could any person be made to learn *any* such new formed language. The difficulty of learning this new language, in which, at the outset, not so much as one book could be found, would therefore be a new created difficulty, in compensation for which it does not appear how or where any preponderant or equivalent facility would be to be found. Enriched, partly by analogy from its own stores, partly by importation from foreign languages, dead and living, some one of the existing European languages would, it should seem, be found better adapted to the purposes of an universal language, than any new one which, in the nature of the case, could be framed. Moreover, in his explanations, the ingenious author began at the wrong end. Not, observing that it is from our corporeal ideas that all our mental ideas are derived, and that, accordingly, as far as the means of tracing them have been within our reach, all words now employed in giving expression to incorporeal ideas, were originally employed in giving expression to corporeal ideas: words now employed for giving expression to incorporeal ideas, are those which he begins with, thus putting the cart before the horse. At the time when this essay was written, the discoveries made by Locke in the field of Psychology, had not been published. If they had been known to this ingenious author, this book of his would either not have been written, or would have appeared in a form considerably different. In the complete failure of the main design, may, perhaps, be seen the cause why it is at present so little known; and why (for this, it is believed, is the fact) that, notwith-

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standing the patronage and recommendation of the Royal Society, of which this Bishop was one of the most respectable members, it never saw a second edition. But, in other respects, it would be found the product of a truly original genius, abounding in ideas from which, in the fields of Logic and Universal Grammar, useful instruction may be found in abundance.

" VI. *Violent Motion.**

" The *general kinds* of Violent Motion, may be distributed according to the effects upon the thing moved, into such as denote

Translation into a new place; comprehending

1. *Motion together; when* the *Mover sustains the thing moved;* to which may be annexed, by way of affinity, that other *action, by which one* thing sustains, or *hinders the falling of another.*
   - Carrying, *bring, convey, bear, serve, import, waft, weare about one, portable, portage, porter, baggage, vehicle, fare, bier, packhorse.*
   - Bearing, *supporting, sustain, hold up, prop, shore up, stay up, uphold, carry, stand under, shoulder up, bolster up.*

Amotion, when the Mover and Moved do at the beginning cease to be contiguous: or, *admotion,* when the thing moved doth end in a contiguity of something else.

2.
   - Casting, *throwing, fling, hurl, project, inject, eject, ding, pelt, toss, coit, sling.*
   - Catching, *apprehend, lay hold, snatch, lay hands on, grapple, grasp, scamble.*

Often returns into the same place; according to *greater or less degrees.*

3.
   - Swinging, *Vibration, waving, brandish, agitate, exagitate, to and fro, flourish, rock, sway, dangling, pendulous, wield.*
   - Shaking, *Quassation, concussion, jogging, agitate, dandle, wag, swag, sway, jolt, totter, flutter, shatter, waving.*

Some impression from the Mover; according to the more

General name: or *that which is from an obtuse hard body.*

4.
   - Striking, *Percussion, smite, bang, beat, bast, buffet, cuff, dash, hit, swinge, thump, thwack, blow, stripe, slap, flap, rap, tap, kick, wince, spurn, bob, box, fillip, whirret, yerke, pummel, punch, rebuff, repercussion, collision, gnash, skittish, interfere, let fly at.*
   - Knocking, *beating, Blow, butt, Mallet, battering, jobbing, Ramm.*

Particular kind; by *the end of a thing,* more *obtuse, or acute.*

5.
   - Pounding, *braying, contusion, stamp.*
   - Pecking, *Mattock, Pick-ax.*

Dissolution of Union in the same body, *according to,*

6.
   - The *Stiffness* or *Limberness* of the body wherein it is made.
   - Breaking, *Fracture, Rupture, burst, Crack, Crash, Squash, Dash, Flaw, Shatter, shiver, crumble.*
   - Tearing, *torn, dilacerate, rend, rent, ragged, tattered, flittered, jagged, pull in pieces.*

The figure of the body by which it is made; either *an edge* or *a point.*

7.
   - Cutting, *Incision, gash, slash, hack, hew, chop, rip, chip, snip, slice, section, segment, carve, dissect, whittle, barb, pare, top, lop, curtail, dock, sharp, keen, Hatchet, Pole-ax.*
   - Pricking, *Stabbing, Goad, pungent, runn in, thrust in, goar.*

" *Operation.*

" The Sundry kinds of *works about which men* of several callings use to *employ themselves,* are usually styled by the name of

Operation, *Labor-ious Pains, Travail, Toil, moile, Turmoile, drudge, droil, work, handy-work, Ply, co-operate, take pains, lay about him.*

Play, Sport, lusory, dally.

These are either,

- More *common* and general; relating to
  - Mechanical Faculties, I.
  - Mixed Mechanical operations, II.
- More *Particular;* belonging to the providing of
  - Food, Agriculture, III.
  - Houses, or Utensils, Fabrile Arts, IV.
  - Clothing, Sartorian Trades, V.
  - Physic, Chymical, Pharmaceutical Operations, VI.

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* The passage here copied is a mere characteristic extract, (being a portion of Part II. ch. ix.) from the elaborate work of Bishop Wilkins, which may be called an attempt to make an analysis of the whole subject matter of language, or a classification of all things whether in the material or immaterial world, to which there can be any occasion to apply words; or, as the Bishop describes it, " a just *enumeration* and description of such things or notions as are to have *marks* or *names* assigned to them."—*Ed.*

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"I. Operations belonging to the Mechanical Faculties, are either such as do refer to the

Lever; for the forcible motion of a thing *upwards* or *downwards*.
1. Lifting, *heave, hoise, advance, elevate, exalt, Lever, Crow, Crane.*
   Depressing, *strein, stress, weigh down.*

Balance; for *trial of* the *weight* of things, or the *preponderating of one side.*
2. Librating, *balancing.*
   Biassing, *preponderate.*

Wedge; for the *dividing of hard* tough *bodies*; to which may be opposed the *thrusting of them close together.*
3. Cleaving, *rive, slit, split, Cleft, Chink, Chat, Crevise.*
   Compressing, *crib, gripe, pinching, press, squeezing, straining, wring, nip, twing, throng, crowd, crush, constipation, bulge.*

Pully, when the mover and moved continue their contiguity in *admotion*, or *amotion.*
4. Pulling, *pluck, tow, tug, lugg, twing, twitch, draw, drag, Draught, hale, Revulsion, vellication, distract.*
   Thrusting, *push, shove, drive, rush, justle, repell, extrude, intrude, press, throng, crowd, cramm, force, wedge in, venmue, run at, foin at.*

Wheel; by *continued turning about*, or *rolling backward or forward.*
5. Vertiginating, *turning round, Revolution, wheeling, Rotation, twirl, whirl, spinn, roll, round.*
   Volutation, *tumbling, rolling, wallow, welter, rock, trundle, waddle.*

Screw, to which may be adjoined for some affinity, the *action of that concave Instrument used for the projection of water.*
6. Screwing, *Winch.*
   Syringing, *squirting, spirt, spouting.*

Spring, wherein there is a motion of restitution; to which may be annexed for its affinity, the *forcible putting a thing out of its natural tension* and posture.
7. Springing, *elastical, fillip.*
   Bending, *bow, warp, crooke.*

"II. Those are styled Mixed Mechanical operations, which are not appropriate to any one kind of art, but are general and common to many. These do concern the

Uniting or separating of several bodies; considered more

Simply,
1. Binding, *gird, Band, Bond, Bundle, Packet, Fardle, sheafe, faggot, tack, lace, swaddle, swathing, trussing, girt, surcingle.*
   Loosening, *unbind, undoe, solve, lax, slack, relaxation.*

Relatively to the affections of Binding, viz. *fastning of the bond by a knot*, or *confused kinds of knots.*
2. Tying, *Knot, Node, bracing, buckling, coupling, fastning, knit, furling.*
   Tangling, *entangle, hamper, ravel, perplex, snarled, felter, intricate, involved, Intrigues, extricate, complicate, insnare, Labyrinth.*

Concealing, or *manifesting*; either more

Common.
3. Covering, *heal, Veil, shroud, hide, whelm, stop, Canopy, Hood, Lid, palliate, cloake, overlay, overrun, overshadow.*
   Uncovering, *open, expose, discover, shew, reveal, naked, unmask, unveil.*

Special, relating to containing bodies.
4. Shutting, *stop, close, inclosing, immure, exclude, seclude, recluse, obstruct, Wink, fold up, pinn up, sowe up, seal up, corke up, lute up, lock up, put to the door.*
   Opening, *breaking up, disclose, display, Expansion, gap, Slade, Aperture, unstop, expose, lay* or *set open.*

Putting of things nearer together, or *farther asunder*; either

More general,
5. Gathering, *Collect-ion, assemble, convene, compeile, levy, raise men or money, Receiver, rake or scrape together, rally, glean, pick up.*
   Scattering, *discuss, disperse, dissipate, sprinkle, strew, inspersion.*

More particular; *with reference to* the

Capacity of

Consistent bodies, and such as are not supposed to be contained.
6. Heaping, *accumulate, amass, lay up, stow, pile, Stack, Mow, Cock, Rick, Shock, Drift, Dunghill, mixen.*
   Spreading, *diffuse, Expansion, display, Suffusion, strew, run, plash, lay cloth.*

Fluid Bodies, and such as are supposed to be contained in something.
7. Filling, *replenish, Repletion, full, plenary, sated, staw, cram, stuff, farse, recruit.*
   Emptying, *evacuate, vacant, Vacuity, rid, void, exhaust, Chasm, clear, lanke, lave, draw dry.*

Motion of bodies, chiefly fluids; according to the *more general name*: or that which is *involuntary, and besides intention.*

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8. { Pouring, *Effusion, Infusion, gush, guggling, yewer, Tunnel.*
{ Spilling, *shedding, run out, seeth over.*

" III. Operations belonging to Agriculture, do concern either

The *Ground, or Land:* in respect of,

Loosening it; either *by single persons;* or *by the help of drawing Beasts.*

1. { Digging, *delve, break up, spit, spade.*
{ Plowing, *tilling, breaking up, coulter, share.*

Breaking the clods, and smoothing the surface.

2. { Harrowing.
{ Rolling.

Helping or directing the fertility of the Ground, *by adding some new matter,* or *removing the impediments of noxious Plants.*

3. { Manuring, *cultivate, dunging, marling, soiling, Tilth, culture.*
{ Weeding,

The Grane or Seed, chiefly of Herbs; in respect of

Putting it into the ground, or *taking it off from the ground* upon its maturity.

4. { Sowing, *seminate.*
{ Reaping, *mowing, Crop, Harvest, Sithe, Sickle, stubble, swarth.*

Separating of it *from the straw* or *lesser husks;*

5. { Threshing, *Flail.*
{ Winnowing, *Fan, Ventilation.*

The *Propagation of Trees or Shrubs,* chiefly by

Putting the Root of the Plant in the ground; to which may be adjoined, *the putting of Grain segregately into the ground,* which is sometimes used for pulse.

6. { Planting, *implant.*
{ Setting.

Joyning a part of one plant to another, either *to the top of the body, or some branch being out,* or *to the sides of the body.*

7. { Grafting, *ingraft, Imp.*
{ Inocolating.

Cutting off superfluous Branches; to which may be adjoyned, *the cutting down of the whole.*

8. { Pruning, *dressing, cutting, coping.*
{ Felling, *grubb, Wood-fall.*

" IV. By Fabrile Operations, (*Smith, Carpenter, Mason, &c.*) are meant all such kinds of works as do primarily concern our Houses or Utensils, whether for necessity or ornament: to which may be adjoyned, those operations which concern the making of earthen ware, styled, Figulatory, *Potter.* These are distinguishable into such as denote

Dissolution of Continuity; either by

Separating of some thin parts from the surface of a body by rubbing with an edge; or *breaking the body itself into minute parts* by percussion with some obtuse body.

1. { Shaving, *scraping, raze, razour.*
{ Contusion, *bruising, pounding, stamping, braying, morter, pestle.*

Dividing from a body some small part; either *by affriction upon a stone,* or *with an iron instrument.*

2. { Grinding, *attrition, Grist, Quern, Mill.*
{ Filing, *Raspe.*

Dividing the parts of a body, by cutting it, either in *roundish caveties,* or *in oblong scissures.*

3. { Boring, *perforate, foraminate, pierce, Bodkin, Dril, Awle, Gimlet, Wimble, Trepann, Awgre.*
{ Sawing, *Saw, whipsaw, &c.*

Uniting, either of metalline or other bodies, *by some third body adhering.*

4. { Sodering, *Cement, luting.*
{ Gluing, *cementing, glutinous, conglutinate.*

Shaping of bodies into particular figures; either *by*

Hammering or *Melting.*

5. { Forging.
{ Casting, *melt, founding, fusile, molde.*

Cutting, either a *solid and bulky,* or *a flat figure.*

6. { Carving, *Sculpture.*
{ Graving, *engrave, etching.*

Compressing of a soft body; or *circumagitating* either a soft, or hard body.

7. { Kneading, *moulding, plastic.*
{ Turning, *Lathe.*

Adorning the surface of the body; either *by variety of colours,* or *adding an external lustre to it.*

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8. { Painting, *limn, draw, enamel, fucus, pencil.*
Varnishing, *size.*

V. Sartorian Operations do concern either the

Preparations of stuffs; by

Making several vegetable or animal substances into *Thread.*

1. { Twisting, *tortion, wreath, writhing, twine, winding.*
Spinning, *Spinster, Rock, Distaff.*

Joyning such Threads together into Cloth.

2. { Weaving, *Texture, Contexture, Loom, Web, braid, woven, Hurdle, Shuttle, Wicker, Matt.*
Knitting.

Thickening and *colouring* such cloth.

3. { Fulling, *milling, Fuller.*
Dying, *stain, Tincture, tinge, ingrain.*

Making of Stuffs *into Vests;* either by

Uniting necessary, and *cutting off unnecessary* parts.

4. { Sowing, *Stitch, Seam-ster, Suture, Welt, needle, dearn, quilt, draw cloth, rip.*
Clipping, *Scissors, shear, shorn, out.*

Placing together the parts in *greater* or *lesser plicatures.*

5. { Folding, *wrap, lap, plait, clinching, clutching, doubling, envelop.*
Curling, *crisping, frizling, furling.*

Preserving of such stuffs or vests *clean;* common likewise to other things.

By the help of *water* or *liquor; either when*

Things are *put into, and agitated in the water;* to which may be opposed the *putting upon them other bodies of a more gross consistence;* styled,

6. { Washing, *scouring, Lotion, rince, Laver, Laundress, gurgling.*
Smearing, *daubing, anoint, ointment, Unction, greaze, chrism;* and many with [*be*] as *bespaul, spit, spue, sprinkle.*

Water is imbibed and communicated to the thing; to which may be adjoined, for its affinity, the *putting of things into liquor in order to the communicating of some new quality to such liquor.*

7. { Soaking, *steeping, embrewing, macerating, watering* Land, &c., *bathing, imbibe, sinke, sop, brewis, embrew.*
Infusion, *watering* Fish, &c., *macerate, Decoction, impregnate.*

By external Motion of or upon them, *more or less violent.*

8. { Rubbing, *scrape, Friction, Frication, scrub, chafe, Attrition, frit, gall, scour, taw, grate.*
Wiping, *stroke, terse, handkerchief, towel, knapkin.*

By Instruments to separate those minuter bodies which adhere to the superficies.

9. { Brushing, *weeping, Beesom, Whisk, Brush, Broom, Maukin.*
Combing, *carding, currying.*

" VI. By Chymical Operations are meant such kind of works as tend to the *changing* of bodies, with respect to the *position* and *figure of* their *minuter parts.* By this, amongst other ends, medicaments are usually prepared; for which reason those kind of operations styled Pharmaceutical, belonging to the apothecary, may be hereunto annexed.

The operations belonging to this head, do concern the changing and preparing of bodies; either *by*

Instruments, for the reduction of them into minute parts; by *compression and affriction* betwixt two hard bodies; or *by separating the parts so reduced, through a porous plain.*

1. { Grinding.
Sifting, *bolting, Sieve, sieroing, ranging.*

Liquors; either

Changing the consistence of bodies; *by reducing* them *into* a more *liquid,* or a more *dry consistence.*

2. { Dissolution, *melt, liquifie, dissolve, thaw, fusil, flux, run about.*
Coagulation, *congealing, Clod, Curd, Gelly, Clottered Gore, Concretion, grumous.*

Dividing hard bodies into minute parts; *by an acid liquor,* through which such parts are dispersed; or *sinking down of such parts to the bottom,* by the mixture of some other liquor.

3. { Corrosion, *eating, fretting, gnawing, caustic.*
Precipitation, *settling.*

Separating of these parts from the liquor; *by passing them through a porous body;* either *downward,* or *both upward and downward.*

4. { Straining, *Percolation, squeeze, colender.*
Filtration, *filtre.*

Heat, applicable chiefly either to

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Liquid bodies; which being kept for some considerable time in a gentle heat, upon this usually follows, either the

Loosening the inward parts of such bodies, so as by agitation *they work one upon another;* styled,

5. { Digestion.
Fermentation, *work, fret, Leven, Yeast, Barm, Rennet.*

Separating of the finer parts, by raising them up in the form of a liquor; or, *the farther separating of the more spirituous from the watery parts of this liquor.*

6. { Distillation, *still, Limbeck, cohobation.*
Rectifying.

Hard and solid bodies; either by

Driving away the more watery and volatil parts *and leaving the more solid;* or, *raising the volatil parts in the form of a salt.*

7. { Charring, *chark, Tinder.*
Subliming, *sublimation.*

Burning away the combustible parts of a body; or *turning the parts remaining after such burning into a liquor.*

8. { Calcination.
Lixiviation, *deliquiate, Lye, Buck.*"

APPENDIX.—No. VIII.

New Principles of Instruction, proposed as applicable to *Geometry* and *Algebra*, principally for the purpose of supplying to those *Superior* Branches of Learning, the *Exercises* already applied with so much success to the *Elementary* Branches.

The following principles not having any particular connexion with the New System, nor having been included in the attestation given in favour of that system by extensive experience, could not present a sufficient title to be included in the Table. In the character of candidates for examination, they are, however, submitted to the consideration of the competent authorities.

It will, at the same time, be a question for learners and adepts in the science to answer to themselves, whether, in this same method, additional promptitude may not be found, as well as positive facilities, for the arranging of geometrical ideas in their minds, and aiding the communication of them, upon occasion, to others, whether in the character of learners or adepts.

I.

Principles, with correspondent Exercises, applying specially or exclusively to Geometry.

1. *Geometrical-Relation—Verbally-Expressing, or Purely-Verbal-Expression-Maximizing, or Diagram-Occasionally-Discarding Principle.*
2. *Practical-Use-Indication-Maximising, or Practical-Application-Maximizing Principle.*
3. *Genealogical-Table-Employing, or Synoptic-Filiation-Indicating Principle.*
4. *Special Visible Sign-Employment-Maximizing, or Verbal-Expression-Occasionally-Discarding Principle.*

II.

5. *Key-Presenting, or Contrivance-Indicating Principle.**

Among the five above-mentioned principles, of the four that apply to Geometry, between the *first* and the *fourth* an intimate relation will, at first glance, be seen to have place, they being in fact the converse of each other. But, of the *fourth*, neither the *use*, nor consequently the *nature*, can be fully explained till that of the third, to which it is subservient, has been brought to view. In the character of *exercises* or modes of *learning*, the utility of them, has, in both instances, received, though in respect of the number of the learners, as yet but on a narrow scale, the attestation of experience.

I. *Geometrical-Relation-Verbally-Expressing, or Purely-Verbal-Expression-Maximizing, or Diagram-Occasionally-Discarding Principle.*

Of this principle, the great use is, to serve as a test, and, by that means, an instrument of, and security for, *intellection.*—See above, Exercise No. 9, Princip. No. 24. (pp. 44, 51.)

Mode of Performing this Exercise.

Without the aid of any diagram, and, consequently, without the use of any of those signs, such as the letters of the alphabet, which, as often as for bringing to mind the figure in question, a *diagram* or delineation of it is employed, are necessary for designating and distinguishing from each other the parts of the figure, a *proposition* (in the geometrical sense of the word) and, consequently, the *figure* which is the subject of it, is expressed in *words* alone; which words will, of course, be such, that every *proposition* (using the word *proposition* in the logical and grammati-

* Besides those here enumerated, two other subjects are discussed in this No. of Appendix, viz. Demand for Revision of the Field of Mathematics, and Interconvertibility of Geometry and Algebra.

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cal sense) which they serve to constitute, will be what is called a *general* proposition, having for its subject not merely an individual object, but a class, genus, or sort, of objects.

Without the aid of any diagram, any such description, can it then be given in such manner as to be intelligible? From his own experience,—from experiments made at his suggestion, in the instance of three persons, at two widely distant points of time,—the writer of these pages is enabled to answer in the affirmative. In the instance of two of them, the experiment began with Euclid's Elements, and went no farther than the first six books. In the instance of the other person, it began with one of the most copious, and, at that time, best approved institutional works on *Conic Sections*,* and was continued, if he misrecollects not, to the very end. In both instances the papers in which the descriptions in question are contained, are in his possession, though at this moment not accessible. In all three instances the learners were of a self-directing age. What was done, was done purely for the satisfaction as well as instruction of the operators themselves, and not in the way of exercise for the satisfaction of a teacher; for, except the learners themselves, in no one of the three instances was there any teacher in the case. In the case of the Conic Sections, though he himself neither did at that time read, nor since then has ever read, so much as a page of what was written, yet, so it was, that the whole of it was written in his presence: and well does he remember the tokens of self-satisfaction, as well as promptitude and velocity, with which the performance of the self-imposed task, continued as it was during a course of some months, was accompanied,—symptoms which, for such a length of time, nothing but the full sense of continual success could assuredly have produced.

But, without a perfect conception, or, at any rate, without the supposed consciousness of such perfect conception, a task of this kind and of this length never could have been performed. From first to last no diagram having been employed, consequently, no reference to any actually drawn diagram made, it is only by words—by words of a purely general nature, that the several relations borne by the several parts of the figures in question to each other, that the ideas in question, could have been expressed. But, in this way, the ideas in question having actually been expressed, how much superior, in the character of an *intellectual test*, this species of exercise cannot but have been, in comparison with any other, will, it is hoped, without entering into any diagrammatical exemplifications, be found sufficiently intelligible.

For this purpose a particular mode of designation, applicable to the several parts of a geometrical figure, required to be devised, and was devised and settled accordingly. For example, in order that such words of designation as *right*, *left*, *top*, *bottom*, and the like, might be capable of being employed, it was necessary that, of the figure of which a description was to be given, the position should be determined. But, once for all, care was taken to declare and record, that it was merely for the purpose of description and exemplification that, so far as concerned position, this declaration was made; and that, in whatsoever position the figure were placed, the species it belonged to and the properties it possessed would be the same.

I. Enunciation or enunciative part,—enunciative, viz. of the proposition to be demonstrated.†

II. Demonstration or demonstrative part. In every portion of discourse, to the whole of which the term *proposition*—*a proposition*—is customarily applied by geometricians, these two parts at least will be found. To these will in most instances be found added what may be termed the *direction*—*directive part*, or *preparatively directive part*, viz. the part by which direction is given for the operation to be performed, and for necessary additions to be made to the originally exhibited or conceived figure, for the purpose of *preparing* the ground for the demonstration.

In Euclid's Elements without exception, and for a considerable extent, if not for the most part, in other books, in the higher branches of geometry, in giving expression to the *enunciation* as above, the mode of *purely verbal designation* here proposed for all the abovementioned parts is actually employed. But, so far as this practice is pursued, the *propositions* (taking the word *proposition* in the logical sense) are all *general*; the *ideas* conveyed by them are all *general ideas*; and in this *original* state it is, and without need of *extension*, that, in so far as they have place in the mind, they lie there ready to be applied, upon occasion, to all such individual figures as are respectively comprehended within their import.

But now, instead of being thus general, suppose the mode of designating them such, as to confine the application of them to the indivi-

* Hamilton's, as far as recollection serves.

† [*Demonstrated.*] Viz., either that what is asserted, as in the case of the sort of proposition called *a theorem*, is correct and true; or that what has been undertaken to be done (as in the case of the sort of proposition called a problem,) has accordingly been done. When any such phrase as *the demonstration of a proposition* occurs, the sort of proposition which on any such occasion is most apt to present itself, is a *theorem*; and this, not only because theorems more frequently occur than problems, but because in the case of a problem, the term *demonstration* will not apply in such manner as to complete the sense, without the insertion of a number of words, of which, in the other case, there is no need.

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dual figure, exhibited by the diagram that accompanies them. For example, instead of saying, *a square having for its side the longest boundary of a right angled triangle is exactly equal to both the squares taken together, which have for their sides respectively the two other boundaries of the same triangle*, suppose the proposition worded thus—*in the triangle in question* (describing it by letters,) *the square having for its side such boundary* (describing it again by letters,) *is exactly equal to both the squares taken together, which have for their sides respectively the two other boundary lines*, (describing them also by letters.)

By such a mode of expression or designation, if it be supposed that no other more general mode is ever added or substituted to it, what general ideas—what practically applicable instruction would be conveyed? Answer;—Surely not any. For rendering the proposition susceptible of conveying any such instruction, what would be the course necessary to be pursued? Answer;—To substitute to this *diagrammatical* and *individualizing* mode of expression or designation, the *purely verbal*, and thence *general*, mode of expression or designation here in the first place brought to view. Here, then, before any real acquisition in the way of science can be made, there is an additional operation that must be performed,—an additional operation requiring much greater exertion of mind to perform it, as well as a much greater strength and maturity of mind to be able to perform it, than the original one.

This general mode of expression or designation, which, to the purpose of useful and practically applicable intellection, will, in the case of the enunciation, as above explained, be acknowledged to be, at least to a very considerable extent, absolutely necessary, will, it is hoped, in the case of the other two parts of the proposition, be acknowledged to be at least useful; useful, viz. on the supposition of its being *practicable*: and that it is practicable hath, as above, been already proved by repeated experience, without any contrary experience to oppose to it.

Diagram occasionally discarding principle; by the word *occasionally*, thus inserted in the composition of this, one of the names to be employed for the designation of this principle, intimation is given, that upon the *diagrammatical*, i. e. the ordinary mode of designation, no permanent exclusion is proposed to be put: that it is in aid, and not in lieu, of that ordinary mode, that the one proposed—the purely verbal mode—is proposed to be employed. So far is any such constant exclusion of the diagrammatical mode from being intended, that by the principle mentioned in the fourth place, this diagrammatical mode is to some purposes, by means of a set of adapted signs, proposed to be employed by itself: by itself, and thereby to the occasional and temporary exclusion of the verbal mode.

That, under the burthen imposed by the labour of forming, by means of a description given in the purely verbal mode, a conception of the figure meant to be presented to the mind, considerable relief will very frequently be afforded by a glance at the figure, cannot admit of doubt. For facilitating conception, in the first instance, the verbal mode and the diagrammatical mode will thus be employed in conjunction: in conjunction, and so far, perhaps, with not very unequal advantage.

In comparison with the *diagrammatical* mode, no mean advantages will, it is believed, be found attendant on the *purely verbal* mode.

1. One is—the giving to the general ideas, the presence of which in the mind is, in every instance, necessary to intellection, a sort of perpetual and uniform fixation, by means of a determinate set of words,—thoroughly considered, apposite, and thereby, sooner or later, perfectly adequate words,—instead of leaving these general ideas to be, on each individual occasion, in a hasty, and, therefore, frequently in an inadequate manner, caught up in the way of abstraction: caught up without words for the fixation of them; and therefore, in case of error, without possibility of correction, there being no permanent or determinate object to which correction can apply.

2. The other advantage is—the saving that will frequently be made of the expense of time and labour, necessarily attached to the making out the several parts of the figure, by means of the letters employed in the designation; and, moreover, of the perplexity, and, as it were, mental stammering, with which the operation of ringing the changes upon these letters is, especially in unpractised minds, so apt to be attended. Sometimes, it is true, it may happen that, in addition to the general glance taken of the figure, recurrence to these letters may, for the purpose of forming a conception of this or that part of it, be found necessary. But at other times it may happen that no such recurrence will be found necessary: the need of it having been effectually superseded by the purely verbal description, by means of the general words contained in it.

A question here presents itself, as one which, by any learner in geometry, might not unaptly be put to the author of any institutional work, by means of which he was occupied in teaching himself. The directions and reasonings, the only use of which is to convey so many general ideas, why is it that for giving expression to them you have *not* (while in the case of the enunciation made of the proposition to be demonstrated you actually *have*) employed the correspondent general words? These general words, did you know where or how to find them? Then, why is it that you have not found them and produced them? With all its load of unavoidable and immoveable difficulty, is not the task heavy enough for us? Must this additional, this moveable difficulty, be left pressing on us? These same general

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and only adequate words, is it then that you have *not* been able to find them? You, to whom, by so many years of study, and so often continually repeated applications to practice, the subject has been rendered so perfectly familiar,—with what degree of consistency can you entertain any such expectation as that *we*, to all of whom the subject is perfectly new, and many of whom are, in various degrees, dull or inattentive, or both, should be able to accomplish at the moment, and at every moment, a work, which our master has not been able to perform in so many years?*

Thus much will not, it is believed, be found open to dispute. The only idea which, in any case, is conveyed by the individual figure in question, as delineated in the diagram in question,—the individual figure, of which the parts are designated by the letters of reference,—is an individual one. But, except in as far as by abstraction from these individual ideas, general or specific ideas are formed, from no number of such individual diagrams, can any general ideas, applicable to any practical purpose, be deduced. This process of generalization, the learner in question, is he competent to the performance of it? If he is, then proportioned and equal to the number of these acts of generalization that he is competent to, and performs accordingly, is the stock of mathematical science which he actually lays up, at any rate, for the time. But, in any given instance, suppose a general idea thus formed, and for the moment laid up, note well the great disadvantage under which the operation is performed. No precise form of general words has the learner before him, by which this idea of his stands expressed, and by which, were he provided with it, the idea might, as it were, be anchored in his mind. If the occasion of making application of it recur with a certain degree of frequency, he will, notwithstanding the want of apt words for the expression of it, retain it in a state fit for use. But let it, for a certain length of time, be unemployed, the words which should have held it fast being wanting, the consequence is, it drops out of his mind, and as well might it never have been lodged there.

Whatsoever form of words is necessary and sufficient to the giving expression to the general idea, which the individual diagram with the letters which all along apply to it, are intended to convey,—now, suppose it, as in the case of Euclid's proposition as above-mentioned, ready provided, and extended not only to the *propositions*, but also to the *demonstrations*, and the directions by which the *preparatory additions* to the figure are described. Things being in this state, the idea from the very first presents itself to his mind, in all its generality: in the only garb and condition in which it is capable of being applied to use. If then so it is, that, from the proposition in question, demonstrations, as above included, he has succeeded in deducing any idea at all, that idea is a *general* one, an idea fit for use, it is not a mere individual idea, having for its necessary support the individual figure. In that case, employing the general words in question, or others that are equivalent to them, he will, in addressing himself either to a teacher for the purpose of proving, or to a learner for the purpose of communicating, his proficiency, find himself, on the occasion of any *line*, for instance, which, for the purpose of the demonstration, requires to be drawn, in a condition able to describe it by words designative of the relation which, when drawn, it will bear to the other parts of the figure: he will not say, draw A B, or draw A C, leaving it for the party addressed to make discovery of the place which the line, when drawn, will occupy; a discovery which, otherwise than by seeing the diagram, and thereupon copying that part of the diagram, he will, for want of the general words in question, find it impossible to make.

True it is, that without actually having given, either by word of mouth, or in writing, any such purely verbal description of it, to have framed and entertained a clear, correct, and complete conception of the proposition in question, be it what it may, is altogether possible; if it were not, scarcely perhaps would so much as a single person be found by whom, in relation to any such proposition, any such conception had ever been entertained. But not the less true is it, that by one who, upon being required, were to find himself ultimately unable to give, in relation to it, that sort of purely verbal description, no such clear, correct, and complete conception of it could really be entertained.

Of the *propositions* themselves (considered as distinct from the demonstrations and the introductory steps, as above) by *Euclid* a description of the sort in question—a purely verbal description—has, as in every instance, been actually given. But, when he comes to the introductory steps, (preparatory additions,) then it is, that, as if to save the trouble of finding for his conceptions an adequate assistance of general expressions, having given his diagram, it is to the component parts of that individual diagram, as indicated by the letters of the alphabet, that he refers us. Draw the line A B, or draw B C, says the direction that he gives us. But on what account was it that he required us to draw this line? Plainly on this account, and no other, viz. on account of a certain relation which the line so drawn would, when drawn, be found to bear to the other parts of the figure; it is only in virtue of some such relation that the lines, when drawn, can be applicable to the purpose. But, by the letters A B, or B C, is this relation in any degree expressed? Not it, indeed. That same instructive, that same *intellection-proving*,

* It is noticed, as the result of experience, that such a question would not be likely to be put; and that learners generally avoid verbal modes.—*Ed.*

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and, at the same time, intellection-conveying mode of expression which he uniformly applied to his *propositions*,—i. e. the mere grammatical sentence, enunciative, in each instance, of the geometrical relation, the existence of which is thereby undertaken to be demonstrated—how happened it that he did not continue the application of it to his *demonstrations*, and the directions given for the preparatory steps? Had the question been put to him; *for despatch*, would probably have been his answer. But, *for want of knowing very well how*, would not improbably have been the more correct answer; and, at any rate, what should be not only a correct answer, but, moreover, an addition to such effect as would have been necessary to the forming a complete one. For the composition of a book of instruction upon that plan, the human mind had not, in his time, made sufficient advance. The mathematician is one sort of person; the logician is another. It is by generalization that all inventions are accomplished; most discoveries made. But generalization by wholesale, generalization upon an all-comprehensive scale, is the work of the logician: it is, by the same process, performed upon a comparatively small scale,—performed, as it were, by driblets,—that the particular discoveries in Mechanical Philosophy, in Chemical Philosophy, and even in Mathematics, have been made. But it is one thing to make progress in a certain track; another thing to be able to give a description, a clear, and correct, and complete, and easily apprehensible, description of the progress so made in that same track.

Thus it is, that in this as in so many other parts of the field of science, infancy, under the preposterous name of *antiquity*,—infancy continues to set the law to *maturity*; *inexperience* to *experience*.

In regard to this gap in the mass of requisite instruction, ask for the reason of its existence; if, by the word reason, be meant a productive cause, having its root in the essential nature of the subject, no such reason will be found. But if, by the word reason, be meant a cause having its root in the nature of the human mind, there is nothing in it but what, in every part of the field of thought and action, lies constantly under our eyes.

Authority and *habit*.—In these two words, in as far as sinister interest is out of the question, may be seen the cause of all deficiencies in the system of instruction which (time for the operation not having been wanting) continue unsupplied. *Authority*,—the authority of great names: *habit*,—the habit of continuing to travel without reflection, in the track in which, with or without reflection, men have begun, or continued to travel already.

In the use of *general* terms for giving expression to the correspondent *general* relations between the correspondent sorts of figures and parts of figures, *Euclid*, the father of Geometry, went not beyond the collection of words expressive of the purely enunciative part of the discourse called a proposition; for the *demonstrative* part and the *preparatory* part he left it to the learner to deduce the general ideas from the individual objects, presented by the individual diagram, in company with the words, of which, by the reference made to it, the import was in like manner individualized. Can there be any need of doing, or so much as use in doing, that which, in the eyes of the father of the science, was not fit, or at least not necessary, to be done?

The papers in question, in and by which application was, so long ago made, of the *purely-verbal-expression-maximizing principle* to a large portion of Euclid's Elements, not being immediately accessible, an exemplification of it applied to the first proposition of these Elements, has, by the writer of these pages, been hastily formed for the purpose, and will be found in the Appendix.* To save recurrence to books, along with it is given a reprint of the same proposition as exhibited in the customary form in Mr Professor *Playfair's* Elements of that science.

Whether in any, and if in any, in what degree, the conception of the subject is facilitated by the mode here proposed, is a question, to the answering of which, an understanding matured, and in other respects not ill furnished, but by which little or no attention has happened to have been bestowed upon this branch of science, will be in a particular degree well adapted.

Mode of making the experiment, to try the utility of the proposed mode, so far as concerns facility of conception.

1. Try whether the purely verbal mode of designation is intelligible without a diagram. For this purpose, the *diagram*, as given without the letters of reference, and the diagram, as given with the letters of reference, should both be covered.

2. If it be not perfectly or readily intelligible without a diagram, uncover that diagram which has not any letter of reference.

3. If it be not perfectly or readily intelligible even then, uncover now the diagram which has the letters of reference.

As to the giving facilities to conception, by this advantage, should it in any way be found included among the effects of the proposed mode, not only in the instance of each scholar would the labour be alleviated, and expenditure of time diminished, but in a greater degree than antecedently to experience would perhaps be expected, the number of the scholars

* This "exemplification" has not been discovered among the MSS.: but the method proposed by Mr Bentham was (perhaps is) in use, to some extent, in the University of Dublin, and there is in existence a small tract, containing the proposition of the first book of Euclid demonstrated in words alone, (published in Dublin.)—*Ed.*

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reaping from this part of the instruction substantial benefit would be increased.

Even in the grammar school, under the old and still subsisting mode, large according to an eminent and most amply experienced master,* is the proportion of scholars by whom, at the end of a long series of years, no efficient learning is obtained. Larger, again, by far, among those by whom, after years spent in the endeavour, on one part, to ihfuse learning in this shape, on the other to imbibe it, [is the proportion by whom,] no efficient stock of it is obtained.

Under the name of the Ass's Bridge, the 5th proposition, in the very first book of Euclid, is the known stumbling-block, the *ne plus ultra* to many a labouring mind.† Why? Because, to the purpose of clear conception, to the purpose of efficient instruction, the method traced out by Euclid, and followed blindfold for so many ages, is lamentably incompetent. In the Chrestomathic School, it may be presumed with some confidence, there will be no Ass's Bridge.

The Ass's Bridge having thus presented itself to view, the temptation of exhibiting this additional test of the utility of the *purely verbal-expression-maximizing* principle was too strong to be resisted. To the labour of giving expression in this mode to Euclid's first proposition, has, accordingly, been added in the Appendix, the corresponding-like labour applied to the 5th proposition, called the Ass's Bridge.‡

To what length in the field of mathematics this substitution of ordinary and unabbreviated language, to scientific and abbreviated, is in the nature of the case capable of being carried with advantage, can scarcely be determined antecedently to experiment. What is certain is, that in the details, in the actual performance of algebraical operations, i. e. on any other occasion, or for any other purpose than that of explanation, practised in the way of instruction, it cannot be carried over the whole. For in as far as pursued in detail, the system of abbreviation is essentially necessary to the performance of the operations themselves, when taken in the aggregate. But for this assistance, a long life might be consumed before more than a small part of those which have actually been performed, could be perused and understood, after their being respectively invented, not to speak of the labour expended in the course of the invention.

But while the uses of ordinary language were confined to the giving expression to *principles*, i. e. to propositions of so general and extensive a nature, as that by each of them large bundles of details, bundles more or less large and copious [might be embraced,] whether a degree of progress, considerable enough to be productive of sensible advantage, might not thus be made, is a matter to which experiment may be looked to for a determinate answer; and in the meantime the conjectures, in anticipative views taken of the subject by the learned, for a provisional one.

In proportion as in the character of *principles*, a number of these propositions, all expressed in ordinary language, are brought to view,—and laid before the reader all of them in one view,—such point of conformity and disconformity will, it may be expected, be found to have place among them, as will enable the mind to bind a number of them together into bundles, capable of being each of them designated by a term of more extensive import, these bundles into still smaller bundles, and so on: at each step of this abstractive process, the number of the bundles thus diminishing, and the extent of each thus receiving increase. To what length the nature of the case would suffer this process to be carried on, the greatest adept would scarcely venture to predict. But, that the further it were carried on, the more clear and complete would be the view thus rendered obtainable, will hardly be regarded as matter of dispute.

That, for this purpose, changes would require to be made in the stock of expression afforded by ordinary language, seems scarcely to admit of doubt: some terms might require to be added, others substituted, to that part of the ordinary language which is applicable to the purpose. But it is in the way of definition that the whole of this business might be despatched. In these definitions, in as far as the word had been already employed in different senses, the object and effect of the operation would be to fix the import: in as far as it was new, to give to it, for the first time, an import applicable to the subject. In all these cases, in the first instance, the defined word alone would be the word which would be foreign to the stock of the ordinary language: to the ordinary language would belong all the words employed in the explanation of it. True it is that, when once a word in itself new, and thence foreign to the ordinary language, had thus received its explanation, viz. in ordinary language, it then, without inconvenience, might be employed, and of necessity would be employed, in the explanations given of other such new words.

But in comparison with the perplexity produced by the introduction of an extensive system of new characters, the utmost perplexity that would be produced by the introduction of new words, supposing them to be, in a moderate degree, expressive, and at the same time elucidated, by explanations expressed in ordinary language, would be inconsiderable indeed, especially if the number of them was so insignificant as to admit of their being, in the form of a synoptic table, spread under the eye all together at one time.

* See Mr Pillans' Letter, supra, p. 61.

† In practice, this is not found to be the case.—*Ed.*

‡ This, like the former exemplification, has not been found.—*Ed*

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II. *Practical-use-indication maximising, or practical-application maximising principle.*

Signal would be the service rendered to mankind, if, by some competent hand, a line were to be drawn between those parts in the field of Mathematics, the contents of which *are*, and those the contents of which are *not*, susceptible of practically useful application.

1. In some instances the whole contents of the field are of this useful kind, and, in respect of right practice, absolutely necessary. Such is the case, for example, with the doctrine of probabilities, so far at least as the application of it is confined to such events as, besides being actually exemplified, or liable to be exemplified, are of a nature interesting to, that is, liable to be productive of pain or pleasure to, mankind. In these instances, figure has no place. To the field of Arithmetic, deloporic or adeloporic—simple, or algebraical,—(manifestly expressive or non-manifestly expressive)—this class of instances is confined. Such, again, is the quantity added to any mass of money, or money's worth, by allowance paid for it, whether in the shape of interest or discount.

2. Another class of instances there is, in which the whole contents of the field are of this useful, and, at the same, necessary kind. The field is the field of uranological geography or topography: the field of astronomy, in as far as the mass of art and science belonging to it is applicable to the ascertainment of the extent of portions, or the relative position of single places or spots, on the earth's surface.

In this class of instances not only number but figure is a necessary object of regard. The field to which they belong lies therefore within that portion of the field of mathematics, which is common to geometry and arithmetic.

3. In another class of instances the contents of the field are, beyond question, occasionally useful, but without being constantly and in every part of it necessary. This field is the field of *Mechanics*, taken in the largest sense in which that appellation is employed.

In this field, the most general and intelligible use consists in the saving of what may be called *fumbling*: viz. experiment—first experiments or observations employed to ascertain some general matter of fact, which, by calculation alone—calculation grounded on existing experiments and observations, might, without the aid of fresh ones made on purpose, have sufficed.

How great a quantity of labour, and thereby of the matter of *wealth*, and of time,—and thereby of the matter of *life*, which might have been saved by mathematical calculation, has been wasted in fumbling, may be more easily imagined than ascertained.

In this case too the field belongs to that portion of the field of mathematics, which is common to algebra and geometry.

Between what is susceptible of practically useful application, and what is not susceptible of practically useful application, why is it that this line ought to be drawn? What is it that calls upon professional men engaged in the teaching of this branch of art and science, to take this task upon themselves?

Answer;—That persons who either cannot afford, or on any other account are not willing to bestow, any part of their time upon any parts of the field, from which no practical use can be reaped, may not, by ignorance of this distinction, be drawn into any such misapplication of time and labour. A moral transgression, though unpunishable, an injury analogous to the crime called fraudulent obtainment, or obtainment of money on false pretences, would be the act of that teacher, who, knowing that the purpose of the pupil was not to go beyond the productive part of the field, should, for want of the land-mark or warning-post in question, here called for, lead him upon the irremediably barren part of the field.

Of a proposition which, in any shape, has, as above, a physical use, the use will be found exemplified either in some branch or branches of physical art and science, i. e. of *Natural Philosophy*, as it is so commonly, though unaptly, called, or in the doctrine of probabilities. Of these branches, see a list, though not exactly a complete one, in Table I.

Without having any immediate application to any branch of physics, as above, and therefore without having any immediate use, a proposition may still have a practical use. If it has, this use may, in this latter case, be termed a preparatory use.

A proposition belonging to geometry, suppose it to be itself not susceptible of application to any branch of physics, but suppose it, at the same time, necessary to the demonstration of another which is susceptible of such application. Immediate use it has none; but it has a preparatory use.

Such preparatory use may, by any number of degrees, be removed from the immediate use. A proposition is of no use but in respect of its being necessary to the demonstration of another; that other is of no use but in respect of its being necessary to the demonstration of a third: let a series of this sort be of any length, if at the end of it we come to a proposition which has an immediate use, every proposition in the series has its use, for every one of them has a preparatory use.

In the Chrestomathic school, time will not allow of the giving admission to more than a comparatively small part of these mathematical propositions, which are not only practically true, but practically useful: much less of the giving admission to any that possess not this essential requisite.

In so far as practicable, it will, therefore, be highly useful that selection should be made.

For making the selection a principle of distinction, has already just been pointed out; and for the making application of it a process, mainly mechanical, is altogether obvious.

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In relation to each of the several branches of natural science, as above, look over some work or works the most correct, and upon the whole the most complete that can be found, in which, to any part of the physical subject in question, application has been made of mathematical, and, in particular, of geometrical propositions: in as far as this has been done, the work is a work of what is called mixed mathematics. In each of these works, note under the occasions in which, and the places in which, use has been made of any proposition, beginning at least, if not ending with, those, for example, of Euclid. From them make out a list or table, headed with the names of these several propositions.

This done, in any new edition published of that elementary work [Euclid,] under the head of each proposition, make reference, if not to the several instances, at any rate to some of the most eminently useful of the instances, in which application has thus been made of it; ranging them under the head of the branch of physical science, to which they respectively belong, and referring to the work in which they have been found. So in the case of those whose use is of the preparatory kind. For labour, whether of body or mind, there exists not any more effectual sweetener than the indication of use. That branch of useful art or science is scarcely to be found, in which, for the acquisition of the instruction it affords, labour of mind so intense, or in itself so irksome, is necessary as in Mathematics.

In the existing mode, the manner of administering the instruction is pregnant with perplexity to the learner, and no such indication as above, is employed to sweeten it. In the now proposed mode, the manner in which the instruction is administered will be found much less perplexing; and, in the addition of the practical use, the labour will find its natural edulceration, the indication of the reward naturally attached to it.

*By the humble and sincere desire of rendering himself useful to mankind, by contribution made to an association which has for its object the giving extent, in every sense of the word, to useful instruction, the writer of these pages finds, and that not without very serious and unfeigned regret, that he has fallen into a sort of system which, at Edinburgh, and probably in many other seats of learning, is deemed heretical; for true it is, that such is his fortune, and, in this respect, his misfortune, that he belongs to that school to which, in 1793, the late Dr Beddoes, in 1811, the present Mr Professor Leslie, not to speak of Mr Locke, have been found to belong. To this same school it was, moreover, his good or ill fortune to belong, as from what is above stated may be suspected, many years before the work of Dr Beddoes, on this subject, was published, and perhaps before that ingenious philosopher belonged, or had even been sent, to any school.

To him it is, not a matter of exultation but of regret, not a pleasureable reflection, but a painful one, that if this his view of the matter should be found correct and useful; if, by means of institutional books, composed upon the purely-verbal-expression-maximizing principle, geometry, for example, should be found to be learned at the same time, either more easily or more thoroughly than in the present mode, all the institutional books at present existing on this subject, would be found comparatively useless, and cease to be the subjects of purchase.

That without regret, or even without displeasure, such a state of things should be contemplated by persons interested, either in respect of pecuniary matters or in respect of reputation, in the existing stock of writers on this subject, is not consistent with human nature; and if, in this instance, that line of conduct should, on the part of persons so circumstanced, be pursued, which, in all other instances, has been pursued, the object of general research will be, by what means the reputation of the idea, and thence of him by whom it was advanced, may most effectually be depressed.

But if, by considerations of this sort, men, to whom it seemed that they had anything new and useful to offer, had been induced to suppress them, no improvement would ever have been made in any part of the field of art and science. And, in the present instance, a circumstance fortunate to the heretic is, that in no case could the resentment of orthodoxy fall lighter than in his.

Of this school, in as far as concerns Mathematics, the principle or principles may thus briefly be brought to view.

Otherwise than in so far as it is applicable to physics, Mathematics (except for amusement, as chess is useful) is neither useful nor so much as true. 1. That, except as excepted, it is not useful, is a proposition which, when clearly understood, will be seen to be identical: a proposition disaffirming it would be a self-contradictory one. 2. That it is not so much as true, will, it is believed, be found, upon calm and careful reflection, to be little if anything different from an identical, proposition; a proposition contradicting it, little if anything different from a self-contradictory one.

A proposition in Mathematics, [Geometry excepted] what is it? A proposition, in which physical existences, *i. e.* bodies and portions of space are considered in respect of their quantities, and nothing else.

A proposition in Geometry, what is it? A proposition in which physical existences, as

* The remarks which follow bear the title, "All true Mathematics is Physics; or, Beddoism defended against *Edinburgh Review* for July 1812." Dr Thomas Beddoes published, in 1793, "Observations on the nature of demonstrative Evidence," in which he maintained (but by no means to the same extent as the author) the physical origin of mathematical conceptions.—*Ed.*

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above, are considered in respect of their figure, and thereby in respect of their quantity, but in no other respect.

A proposition, having for its subject the geometrical figure called a sphere, is a proposition having for its subject all such bodies as can with propriety be termed spherical bodies, as likewise all such individual portions of space, as can with propriety be termed spherical spaces; and so in the case of a cone, a cube, and so forth.

In as far as any such individual portions of matter and space are actually in existence, the proposition is actually true. In as far as any such portions of matter or space may be considered as likely to come into existence, or as capable of coming into existence, it may be considered as having a sort of potential truth, which, as soon as any such portions of matter or space come into existence, would be converted into actual truth.

In point of fact, no portion, either of matter or space, such as agrees exactly with the description given by Mathematicians of the sort of figure called a sphere, ever has come into existence, (there seems reason to believe.) But, by this circumstance, though in a strict sense,—that is, to the mere purpose of absolutely correct expression,—the truth of all propositions concerning the sort of figure called a sphere is destroyed; yet, in no degree is the utility of any of them either destroyed, or so much as lessened; in no degree is the truth of them destroyed or lessened with reference to any useful purpose, with reference to any purpose, or in any sense, other than a perfectly useless one.

A general proposition which has no individual object to which it is truly applicable, is not a true one. It is no more a true proposition than an army which has no soldier in it is a true army; a fagot which has no stick in it, a true fagot.

A Mathematical proposition which has no individual portion of matter or space to which it is truly applicable, is a general proposition which has no individual object to which it is truly applicable.

Among the sorts of things which are the subjects of mathematical propositions, there is not one which contains any individual objects which, with strict truth, can be said to belong to it.

There are, however, many which, without any error attended with any practical inconvenience, may be considered as belonging to it. These then may, without practical disadvantage, and, at the same time, with great practical advantage, be considered as having individuals belonging to them; be considered, in a word, as true.

Take any body—a billiard ball, for example—that is intended to be spherical, assuredly it is not exactly spherical. Of all the geometrical propositions which have the sphere for their subject, there is not one of them that is exactly true when applied to it; but it is so near to the being spherical, that all these propositions may, without any material error, be applied to it.

Among a number of billiard balls all perfectly capable of being applied to the use for which they were designed, some will come nearer to an exactly spherical figure than others. The nearer any one comes to this figure, the nearer, in that instance, will these several propositions come to the being exactly true.

From the list of the applications, and thereby of the uses made of the several propositions of pure mathematics, the order of invention will follow as a sort of corollary. Amongst other things it may, on that occasion, be seen how, in point of fact, mathematical ideas—how all mathematical ideas—have their root in physical ones—in physical observations. The actual applications thus made to practice,—the indications thus afforded, will be pregnant with immediate practical uses. The general observations deduced as above, in the way of inference, from those observations of detail, will be but matter of curiosity and theory. Curious as it may be it will not be very easy to find the class of persons to whom it will be acceptable. To the non-mathematician it will be neither very interesting nor comprehensible. To the mathematician it will not be very acceptable. That, before any such surface as a circular one had any existence, all its radii were equal, is, in his creed, as in Montesquieu's, a fundamental article. That fluxions and equations should have had their origin in so impure a source as matter, is, to an ardent-minded mathematician, an idea no more to be endured than, by certain religionists it is, that moral evil should have no other source than physical; or, by the sentimental poet, the sentimental orator, or the hypocritical politician, it is that sympathy (whether for the individual or the particular class of the community-political body he belongs to, the nation at large, or the human race) should have so unhonoured a parent, or so despicable an antagonist, as self-regard, either in his own pure bosom, or that of any of his friends.

In the construction of the sort of Genealogical Tables here brought to view, the difference between the order of invention and the order of demonstration, must not be out of view. It is by observation made of the practical applications of which the several propositions have been found susceptible, that the order of invention in as far as it is capable of being determined, will be determined; and, for the benefit of posterity, the secrets of inventive genius brought to light. The path of genius in the intellectual world has been like that of a comet in the physical world. To the eye of the ordinary observer few marks by which it can be discovered are visible. In the spreading of this veil, love of ease concurs with love of fame, or what, in dyslogistic language,—(language, with the addition of disapprobation

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attached to the practice)—is the same thing, pride and vanity concur with indolence. In these circumstances may, perhaps, be found the causes of that obscurity in which, from Euclid, through Newton, down to the present time, the works of mathematicians have been so generally involved. To display to the wondering, and not unenvious, eyes of the adept, inventions and discoveries of a man's own, in all their freshness, is an operation, not only more pleasant, but less tedious than that of endeavouring to facilitate, to the vulgar mind, the conception of discoveries that, whether they were or were not his, are already become stale. As in the order of time, so in the order of dignity and reputation, communication is preceded by invention. But, to communicate in the promptest, easiest, and most effectual manner, what has already been invented and discovered, is itself the work of inventive genius and the matter of an art;—it is a branch of logic, that commanding art, of which invention, to whatever subject applied, constitutes one branch, and no more than one.

III. *Genealogical-Table employing, or Synoptic-Filiation indicating principle.*

Viz. Of the sort of relation of which the propositions in Geometry are susceptible, in respect of use.

Immediate or preparatory; to one or other, or both, of these denominations, will be referable the use of any proposition in mathematics that has any use.

In as far as in either way, it has a use, how to point out, and, in the most satisfactory, not to say the only satisfactory, way, afford a demonstration of that use, was shown under the last head.

In as far as the use is not only preparatory but mathematical,—and, between any two propositions, of the last of which the use is ultimate, while, of the first of them, the use is, with reference to the last, preparatory, others, connected with one another in a series or chain, are interposed, each being in like manner preparatory with reference to that which stands next to it,—a *chain* or *tree* of this sort (or whatever be the sensible image employed for elucidation) will bear some resemblance to the chains or trees of which a genealogical table is composed.

The business is nothing more than to propose for consideration the composition of a table, or set of tables, in and by which these several relations may all of them stand exhibited at one view.

Of this sort of matter, what quantity will be capable of being, in a commodious manner, brought together, so as to be presented in one view, remains to be determined by experiment.

Something will depend on the application which may be found capable of being made with advantage of the principle next mentioned.

For the giving connexion to these several elementary units, use—practical use, in its several modifications, as above explained, will show itself the strongest possible cementing principle. A rope of sand is the emblem of a cluster of propositions, for none of which, be it ever so copious, use in any shape is discernible.

How to construct a Geometrical Genealogical-Filiation Table.

Of this sort of Table, the one essential property is—that the more advanced the proposition is, and thence the greater the number by which it is expressed, the greater the number of the propositions on which the demonstration of it may depend.

Thus, in the case of proposition the first, no proposition on which it has any dependence can have existence. Definitions and axioms are the only materials of which the foundation of it can be composed. In the case of proposition second, there exists one proposition, but no more than one, on which, besides definitions and axioms, it is possible for it to have dependence. In the case of proposition third, there may be two such supports, and so on throughout.

The higher the proposition in question stands in the geometrical scale thus described, the more numerous the list or string is capable of being, the list or string of propositions on which it depends.

In any tabular or synoptic exhibition, the demonstrative part, or the corresponding diagram of the proposition in question, being included in a graphical compartment of correspondent bulk and convenient form, a circle, an oval, a square, or a long square, for example;—a circle, an oval, or a pear-shaped figure, may be considered as the body of the sort of plaything by means of which Franklin drew thunder from the sky, called a *kite*; of this kite, the string of numbers which, one below another, give indication of the several sources or foundation-stones of the proposition, as above, naturally may be so disposed as to represent the tail of this kite.

The higher the place of the proposition is in this scale of *filiation* (the word descent cannot, without a sort of verbal contradiction, be employed,) the longer will naturally be this tail. If, therefore, in this Table, the propositions are ranged in horizontal rows, one above another, according to their places in the scale, the higher the proposition or kite stands, the greater is the quantity of room which, in a vertical direction will naturally be requisite to give lodgment to its tail.

In a tail of this sort, over and above the series of propositions, the axioms and definitions will require to be designated. For the designation of the propositions, convenience will require the employing of the Arabic numerals. If then, for the designation of the axioms, Roman numerals in an upright form be employed, and, for the designation of the definitions, the same numerals in a leaning

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form,—upon this plan the function of designation will be performed in the most simple, and, at the same time, on the most familiar plan.

An explanation of the purpose to which these numerals are respectively applied, might constitute part of the contents of a *border*, with which a Table of this sort might and should be garnished.

As to the postulates, being but three in number, and these of perpetual recurrence, it seems questionable whether, after the first use, any repetition need be made of them; and thence, whether any particular numerals, or other instruments of designation for them need be provided.

For the composition of the border other ingredients are—a list of the definitions and another of the axioms employed in the demonstration of the several propositions included in the Table.

In the case of the definitions and the axioms, what seems to render this concomitant exhibition necessary (but not to the exclusion of the propositions) is, that in the case of the definitions and the axioms, there exist no such means of elucidation as have place in the case of the propositions, viz. by means of the reciprocal exercises afforded by the purely verbal mode of designation, in the one case, and the purely diagrammatical in the other.

In some instances the same proposition will be susceptible of demonstration, from two or more different sources. Wheresoever this multiplicity has place, the kite will have the corresponding number of tails.

As to the border, the string of axioms will be comparatively a short one: a dozen, or some such matter. For the whole number of propositions contained in the geometrical scale, be it ever so ample, this small number will suffice.

Much longer will be the number of definitions. At every considerable step it will necessarily receive increase.

The same border might and should be inserted in both of the two corresponding Filiation Tables, viz. the *verbally expressed* and the *diagrammatically expressed* one.

The degree of closeness as between proposition and proposition in the several rows, consequently the number capable of being inserted with convenience in each row, and the inequalities, if any, in the distances between proposition and proposition in each row, *i. e.* between kite and kite, (tail or tails included,) will depend upon the room, if any, necessary to be left in each inferior row for the tails belonging to the several kites, ranged in the several superior rows. For the construction of such a Table, the most convenient course, it is believed, that could be taken, would be—having settled the scale of magnitude, as determined *i. e.* by the size of the type, form the several kites separately, and then having ready a sheet of paper of the proposed size and dimensions, attach them to it in order: the mark of attachment temporary till everything is finally settled.

In respect of its contents, a Table of this sort, shall it be confined to the propositions contained in Euclid's Elements?—to the propositions contained in Euclid's works at large?—to the propositions contained in the sum of the works of the Grecian geometers?—or shall it, as far as it goes, comprise all such geometrical propositions, as in any way present themselves as susceptible of practical use? To all these questions, surely the last suggests the only natural answer, viz. that which is implicitly contained in the last of them.

By a very simple expedient in the verbally expressed Table, a distinction might be made, by a particular type, between those of modern and those of ancient date. In the elementary branch, in which no curve but the circle is introduced, let Euclid's propositions, for example, as constituting the main part of the work, be in the ordinary Roman type: propositions found in the works of other ancients might be either in the same Roman type with Euclid's, or in another Roman type of different, suppose of inferior size: if the type could not conveniently be diminished, the black letter might answer the purpose.

Another part of the above-mentioned border might be composed of references to the original works, in which the several propositions, denoted by the number by which they are designated in the Table, have been found.

In this case, as in every other, the application made of the exercises, with the place-capturing principle for their support,* will be determined by the nature of the particular object to be accomplished. Having for his guides a corresponding pair of Tables, viz. one containing the propositions (the enunciative parts) verbally expressed; the other with the same diagrammatically expressed; both of them without any of the references by which the filiation is indicated, the exercise is performed either by the *extempore* pronunciation, or by the *extempore* writing, of the references. Briefly thus: given the *kites*, required the *tails*.

By a system of exercitation thus conducted, the object to the attainment of which the process of demonstration in form is directed, would, it is believed, be not only attained, but attained in a much more perfect degree. By the form of demonstration, what is brought to view is the connexion between that individual proposition, and those on which it depends more immediately—that and nothing more. But by this system of genealogy, what is brought to view is the connexion between each such proposition and every other. In the one case, you have first one part by itself, then another part by itself, and so on; in the other case, all the parts are knit together into one connected whole.

At the outset, at any rate, an enunciative

* *Vide supra*, p. 48.

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part, the preparatory part, and the demonstrative part, being distinguished as above, in the demonstrative the forms of demonstration might and should be strictly observed; in the preparative as well as the demonstrative part, each distinguishable step being carefully distinguished from every other, and for that purpose formed into a distinct paragraph. But, the mode of reasoning being once thoroughly understood, sooner or later the former, by which so much room is occupied, might, it is supposed, without prejudice to intellection, be discarded.

Scarcely in the compass of a single Table thus constructed, could any very considerable part of the field of geometry be exhibited. A number of such Tables, standing in succession, would be found requisite, any two or more of which might, upon occasion, by so simple an operation as juxtaposition, be made into one.*

IV. *Special-visible-sign-employment-maximizing—Purely-diagrammatic-expression occasionally-employing—Verbal-expression occasionally-discarding principle.*

Special sign, *special* in contradistinction to *ordinary:* special in contradistinction to the ordinary signs of which language is composed.

Arbitrary, in contradistinction to *imitative*, are, moreover, the signs to be understood to be in both cases.

By any of these special and arbitrary signs, imitation being out of the question, nothing can be intended to be expressed, which is not capable of being expressed by the ordinary signs; to the expression of which the signs of which ordinary language is composed, are not capable of being applied.

But in this case, as in every other, the labour necessary to the faculty of making use of the ordinary signs of which language is composed, has already been undergone, and the faculty acquired.

Whatsoever may be the special signs in question, in the acquisition of the faculty of making use of them, whatsoever labour requires to be employed, is so much extra labour added to that which has been expended in the acquisition of the faculty of employing the ordinary signs.

In as far as any use is made of special signs, here there is an account of profit and loss: or say rather of loss and profit: cost, the labour necessarily expended in acquiring the faculty of making use of these signs: profit, the advantage, whatever it be, derived from the application made of these signs, in lieu of, or in addition to, the ordinary signs, to the purpose in question. First in order of consideration comes the article of profit, that being the final cause, but for which the expenditure would not be made.

Profit derivable from the employing of special signs: or uses of special signs in Mathematics.

I. Exemplification, viz. employing individual signs, or assemblages of signs, to serve as examples of the general propositions which compose the matter of mathematical language, and, by that means, the more clearly and promptly to convey the general ideas of which they are intended to be the expression.

In as far, however, as it is to this use, and no other, that the assemblage of special signs in question is applied, the epithet of *unanalogous* does not belong to them. On the contrary, they are imitative. Thus, geometrical diagrams are a species of drawing: and as, in the case of a square table, the draught of the whole table, in proportion or otherwise, is an imitation of the whole table, so the diagram of a square is an imitation of the principal part of it.

II. To the head of *Abbreviation*, or say *Condensation*, will be found referable whatsoever useful effect is producible by this means.

Ordinary language is the sort of vehicle, and the only sort of vehicle, which is in possession of the employment of conveying ideas to the mind. In as far as any other sign, or set of signs, shares in this employment,—in as far as this function is performed by any special set of signs,—it is only through the medium of those ordinary signs: those ordinary signs, not the ideas themselves which they are employed to denote, are the objects immediately presented to the mind by any fresh special signs.

Unless they present spoken words, *i. e.* the sounds in question in a shorter compass than the shortest in which they can, with an equal degree of conspicuousness, be presented by the ordinary signs or characters of which written language is composed, the effect, if any, of special signs, must necessarily be to retard, not to accelerate, conception; for, first, they have to bring to view the ordinary signs, and, when they have so done, then it is

* In the six first Books of Euclid's Elements, being all that relate to plane figures to the exclusion of solids, the sum of the propositions is 231. This number might, perhaps, not be too great to be conveniently included in one Table.

In one of the latest, and it is supposed, upon the whole, most instructive of the books professing to exhibit the elements of Geometry, one book has for its title, "The Comparison of Solids." In this book, the number of propositions is twenty-one. Besides their respective mathematical and preparatory uses, many of these have their physical and immediate uses. Witness cylinders and spheres, and thereby and therein milk measures, ale measures, and oranges. Of these twenty-one, no one is to be found in the elementary work* of Euclid: every one, perhaps, is in some way or other, descended from its contents. Might not here be another occasion for marking the filiation of the branches contained in this useful supplement, and thereby affording indication and demonstration of the utility of the venerable original?

* The first six Books.—*Ed.*

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that they are, in respect of promptitude, upon a par, and no more than upon a par, with those ordinary signs.

As to the first named of these uses, what is certain is, that, for a length of time, more or less considerable, it cannot take place, or so much as begin to take place. Every new sign of this kind is part and parcel of a new language: and of no new language can any part or parcel be ever learned, without a proportionable expense in the article of time. All this is so much loss. When once the portion in question of the new language has been learned, *i. e.* when between the thing meant to be signified and the new sign an association has been sufficiently formed, then, and not till then, if there be a profit, comes the profit.*

In the instance of each such sign, taken by itself, if between the thing signified and the sign there be any analogy, the closer the analogy the less will be the *cost:* the more frequently the occasion occurs for putting the sign to use, the greater will be the *profit.*

Thence, taking the whole number of the signs together, the aggregate number of the occasions in which they can be employed being given, the profit will be the greater the less the number of the signs.

In algebra, in contradistinction to, and almost to the exclusion of, geometry, has the employment thus given to this principle been most copious. Of the signs of which this language is composed, the number even absolutely taken is very small. The number of the occasions on which they are employed, being, even in a work of a very moderate scope, immense, relatively taken, its smallness is still more conspicuous.

It is, however, to the second head, to speak shortly in the way of abridgment, that, in algebra, any part of the advantages derived, from the use therein made of peculiar signs, can be referred. The effect produced by them is neither more nor less than the presenting, in a smaller compass, the same ideas as those which are produced by the corresponding portion of ordinary language. By the cross employed to signify addition, the effect is neither more nor less than that which would be produced by the word, addition, together with such other words as may be necessary to complete the sentence—the grammatical or logical proposition, for which this one simple sign is capable of being employed, and is commonly made to serve as a substitute.

Of this sort of calculation, the importance, as well as the nature, may be not uninstructively illustrated by an instance in which, by a scientific person of no mean note, ingenuity, labour, time, and expense, (typographic expense,) in no small quantity, were actually thrown away. On the publication of the then new system of chemistry, which bears the name of Lavoisier, the business was divided among three hands. The contrivance of a new set of characters, termed *chemical characters*, adapted to the new theory, being at that time regarded as constituting the subject of a necessary part of that business, was announced as having fallen exclusively to the lot of one of these three hands. Since that time, so different in many parts, as well as so much more extensive is the culture received by the field of chemistry, that even had the principle of the contrivance been good, the application given to it could no longer have continued useful, without having undergone, in every shape, such alteration as would have rendered it hardly recognisable. But it was bad in principle. The new signs were characters or signs to which every imaginable exertion was made to give what analogy could be given to them to the things signified. But had these exertions been even much more successful than they were, these special and newly published characters would never have presented to the mind, especially to the mind of a learner, the ideas of the respective chemical substances, with the same perfection, much less with the like certainty, as that with which they come presented by the corresponding set of names, as expressed by those already and commonly adopted general characters, of which ordinary written language is composed.

In the way of facility afforded to conception, whatsoever effect they were productive of was wholly on the side of disadvantage.

In respect of abbreviation or condensation, it was not productive of any advantage. For giving lodgment to each one of these signs, a receptacle of the same form for each was, as in the case of a Genealogical Table, it is believed, or, at any rate, for illustration, may be conceived to have been, provided. But within every such receptacle, the name of the substance in question, expressed in ordinary letter-press, might have been included, and in such form and size as to be altogether as conspicuous, as readily apprehensible, as the new sign, for the giving lodgment to which it was employed.

Of the notion of this mode of expression, what was the source? Imitation: imitation, without sufficient thought.

In the infancy of chemistry, when as yet she was little better than a slave to the impostor alchemy, a set of special signs were employed, for the designation of such of the metals as were then known; together with some others of the simple, or supposed simple, substances then known, or supposed to be known. But the design, in pursuance of which these characters were framed, was of a mixed character, made up of the opposite ingredients divulgation and concealment; and entertained by minds in which, in sharers of power, perpetually varying and perpetually unascertainable, credulity and imposture maintained a

* Except by means of the abbreviative and concentrative, it cannot facilitate conception more than ordinary language, of which it is the sign, does.

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conjunct sway. By an effort of economy, as whimsical as it was elaborate, the same set of seven signs served for a set of chemical substances, namely, metals, and the same number of heavenly bodies at the same time; that the use might be the more profound, and the adepts, including or not including the inventor himself, the more effectually deluded.

At the same time that, by the pair of self-teaching learners, application, as above,* was made of the purely verbal expression maximizing principle, by the same persons was application made of the principle which there corresponds to and contrasts with it, viz. this same verbal expression occasionally discarding principle, or purely diagrammatical expression employing principle.

What the signs had for their immediate purpose, was to convey to the mind, by these means alone, without the use of words, a conception, in the first place, of the enunciative part of the proposition; in the next place, of the several operations which, in the preparatory part, were required to be performed; and, lastly, of the several assertions contained in so many distinct steps of the demonstrative part.

What, in relation to this head, is recollected of them, is as follows:—1. The signs employed were, or at least were endeavoured to be, made *analogous*, i. e. naturally expressive. If, for example, on the occasion of the first step in the preparatory part—on the occasion of the first operation required by it to be performed,—a line of a certain description was, at a certain part of the figure, exhibited in conformity to the enunciative part, or representation of the subject of it, required to be drawn,—in this case, immediately after this original figure or diagram, came another, in which it was copied, with the addition of the thus prescribed line, and so on for every fresh step a fresh figure.

So, again, when, on the occasion of the demonstrative part, expression came to be given to the first step, a set of marks, of which a small number was found sufficient, were employed for distinguishing those parts, whether lines or angles, which were the subjects of that part of the demonstration, from the succeeding ones; and so on, as above.

Another condition necessary to usefulness is that, taken together, the collection of signs employed should not be too bulky for use,—should not occupy so great a quantity of space as not to be capable, in a number sufficient for instruction, of being brought together into one table.

Neither was this condition, it is believed, altogether unfulfilled. In the ordinary mode of designation, a circumstance which necessitates the allotting to each figure a larger space than would otherwise be necessary, is the affording room enough for the letters of reference: these letters large enough to be clearly distinguishable, and so placed as that no doubt should exist in regard to the part which, in each instance, they were employed to designate. But in the proposed plan, these arbitrary and naturally inexpressive marks would have no place.

In some such way would the matter stand in regard to the several propositions separately taken.

In regard to the Genealogical Tables abovementioned. On this occasion, each proposition, taken by itself, being supposed to be already understood, having, by the means already mentioned, been rendered intelligible, in a Table of this sort, all that could require to be exhibited, would be the diagrams or figures representative of the *enunciative* parts of the several propositions. For showing, in relation to each subsequent proposition, what were the preceding propositions on which it is grounded, and which in the demonstrative part were accordingly referred to, nothing more would be necessary than a cypher, or cyphers, expressive of the numbers by which, in the same Table, those propositions stand respectively designated. The diagrams expressive of the several propositions being included in similar compartments, circular suppose or quadrangular, and those compartments ranged in lines descending from the top to the bottom of the Table, an equal number on each line, the eye would thus be conducted to them with instantaneous rapidity. For this purpose, the order of the numbers should, from first to last, in the whole series of the propositions, be the order of the names upon the Table. Whether in each proposition (the order of the propositions being the same as in Euclid,) to the number expressive of its place in the series, should or should not be added the two sets of numbers expressive of the book to which it belonged in Euclid, and the place of it in that book, experiment would soon determine.

In the case when the same proposition is capable of being demonstrated from any one of several sets of antecedent propositions, sets of cyphers, expressive of them, might be inserted: each set being distinguished from every other by the word *or*, or by a simple line of separation.

In respect of promptitude of conception, could any additional facility be afforded by a set of lines drawn issuing from the succeeding proposition, to the several antecedent ones, by means of which it has been or might be demonstrated? The negative seems most probable: *confusion* rather than *elucidation* presenting itself as the most probable result of a tissue or piece of network, thus irregular and thus complicated.

To the propositions that are in Euclid, shall not all such others be added, by which equally useful instruction, relative to the same class of figures, promises to be afforded, and this, too, in the same Table? Yes, unless propa-

* Vide p. 156.

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gation of superstitious and delusive errors be preferred to propagation of useful knowledge. But in the character of a certificate of acknowledged truth, the authority of Euclid being naturally more extensively received than any other, propositions derived from other sources might be distinguished from those of Euclid by some mark common to them all, and immediately discernible; suppose, for example, by different colours, (or what would be much less expensive,) by being included in somewhat smaller compartments.

That, in the instance of the pair of self-teachers above-mentioned, after a few general hints received from their distantly situated adviser, the carrying into effect these little devices was a matter of no small instruction as well as amusement, is perfectly remembered.

That, in the instance of other learners, by whom no part in the pleasure of invention would be shared, any real profit, either in the way of amusement or of instruction, would be reaped, does not absolutely follow.

One consideration, however, does present itself as promising to turn the scale in favour of the affirmative side. This is the applicability of the two correspondent and opposite modes of expression to the purpose of affording a test of intellection, and such a test as admits of the application of the place-capturing principle.—(Table II., No. 10.) The correspondent exercises will consist of two correspondent and opposite translations: one the recitative, the other the organic exercise.

In the case of a proposition taken by itself, the scholar having before him the process expressed in the purely diagrammatic mode, repeats, by the help of it, the same process in its several steps, as expressed in the purely verbal mode. In this way is performed one of the two (the simple *recitative*) exercises. At another time, having before him the process expressed in the purely verbal mode, he delineates on the spot the same process as expressed in the purely diagrammatic mode. In this way is performed the Organic Exercise.

In a similar manner might the corresponding pair of reciprocal translation exercises be grounded on a pair of *Genealogical* Geometrical Tables.

Suppose one of these Tables expressed in the purely verbal, the other in the purely diagrammatic, mode. In this case the same correspondent exercises might be performed, as have been just described.

Another exercise might have either of these Tables for its ground. The figures of reference (arithmetical numbers) by which the genealogy of the proposition is, in each instance, expressed, being suppressed or concealed for the occasion, the exercise consists in the giving an indication of that analogy, viz. either by the mere naming or writing of the numbers, by the pronouncing or writing the lines or purport of the proposition as expressed in the purely verbal mode, or by delineating it as expressed in the purely diagrammatic mode.

V. *Key-presenting, or special contrivance-indicating principle.*

Key, viz. to the expedient by which the demonstration is effected, and by which, accordingly, in many instances, the entire proposition, whether theorem or problem was first suggested.

This principle will be found applicable as well to Algebra as to Geometry.

Of the sort of intellectual instrument here in view, as applied to Geometry, the Appendix presents two specimens; one applied to Euclid's first proposition, which is a problem, the other to his fifth proposition, which is a theorem. In both instances, this part, termed the key, forms the second of the four points exemplified in these two propositions, as expressed upon the purely verbal expression-maximizing principle.*

Of the use of this sort of instrument, the effect, it is believed, will be found to be the letting the learner into the secret, as it were, of the invention; by showing him what, on the occasion of the invention passed in the inventor's mind.

In these two instances each individual proposition has its own key; the key which belongs to the one, will not be found to apply exactly to the other.

But should all the propositions delivered by Euclid, together with such others as it might be found practicable and useful to add to them, come to have been exhibited upon this same proposed principle, some circumstances common to a number of them, will probably be brought to view, by means of which they will be found distinguishable, with advantage, into so many classes: and, in that case, what will probably be found is, that in addition to, or in lieu of, the keys belonging to the individual propositions, a key will be found applicable to the whole class. Out of these classes may, perhaps, be found compoundable other more extensive classes—say, perhaps, of the second order;—each such class with its key, as before.

Of the sort of instrument of elucidation, for the designation of which the word *key* is here ventured to be employed, happily for the science and the learners, examples, even now, are not altogether wanting in the works of Mathematicians; and, as far as concerns the purpose of instruction at least, howsoever it may be in regard to further discovery and advancement, it will scarcely be denied that the greater the number of these keys, supposing them equally well constructed, that the work affords, the better adapted it is to the purpose.

One example which, of itself, is worth a multitude, is afforded by Montucla, in his Histoire des Mathématiques, tom i., lib. iii., note B., pp. 197–201.

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* This, like the other exemplifications already alluded to, has not been found among the MSS.—*Ed.*

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In it the several peculiar figures, three in number, capable of being produced by the cutting of a cone, (or rather a pair of cones,) are brought together, are confronted with each other, and their principal characteristic properties, viz. those in which they agree with, and those in which they differ from, each other, are placed together in one view,—all in the compass of no more than *four*, though it must be acknowledged, closely printed quarto pages.

A circumstance which renders this example the better adapted to the present purpose is, that, on this occasion, nothing more is given than the enunciative parts of the several propositions, preceded by such definitions, no more than six in number, as were judged necessary. Total number of propositions, according to the numerical figures, no more than 21; though, if it be considered that, in most of them, the three species of conic sections in question are comprised, that number may, in that respect, be required to be nearly tripled.

In this explanation, use, it is true, as could not but be expected, is made of *diagrams*, for reference to which alphabetical letters are in the usual way employed: consequently, neither the purely diagrammatic mode in any part, nor the purely verbal mode of expression, except here or there are or can be employed. But to no inconsiderable extent upon the whole, sometimes for five or six lines together, the purely verbal mode is employed.

Taken together, therefore, in the hands of a liberal minded and unprejudiced institutionalist, out of these four pages, upon the plan here proposed, might be made an admirable and most instructive set of exercises, for the geometrical section of the proposed Chrestomathic School.

Few, perhaps, if any institutional books are in use, in which keys of this sort, in greater or less abundance, may not be found. In particular, wherever anything is seen in form of a note, search may be made for an implement of this kind, with considerable probability of success.

To the natural aridity of the subject, more or less of humectation may be expected to be afforded from the springs of criticism.

Neither in the case of Algebra (as above announced will this same principle, it is believed, be found inapplicable.

In the branch of mathematics called Algebra,—viz. in such problems and such only as have no direct relation to figure—in which figure is not as such taken into the account; two sorts of operations, in themselves perfectly distinct, may be distinguished: viz. the mode of designation or expression, and the contrivance or species of investigation employed in the resolution of problems: the system of abbreviation, and the system of contrivance for the purpose of performing the several particular operations, for the facilitation of which the same system of abbreviation is throughout employed. Between these two the relation is that between the means and the end: the mode of expression the means; the resolution of problems the end.

As to the mode of designation, the object which it has in view, the advantage which in comparison with common arithmetic it affords, may be expressed in a word, *abbreviation*; room, labour, and time, all these precious objects are saved by it. It is a particular species of *short-hand*, differing only from the sort commonly designated by that name in two particulars. 1. In its application it is confined to that sort of discourse which has quantity for its subject. 2. Within its field of action the degree of power which it exercises is much greater than any that is exercised by ordinary short-hand. All that short-hand does, is the employing, for the giving expression to each word, strokes in less number, or more easily and quickly described, than those which are employed in ordinary hand. The mode pursued in writing before the invention of printing, and in printing itself for some time afterwards,—in a word, the system of contractions was a species of short-hand.

Multifarious as well as great are the savings made by the mode of notation employed in algebra. As far as it goes, the following may serve as a specimen.

1. In the room of a number of single words, being those of most frequent occurrence, such as those of addition, subtraction, &c., it employs so many marks in a great degree more simple.

2. Of an assemblage of figures, *i. e.* the common Arabic characters expressive of the names of numbers,—characters which of themselves constitute a species of short-hand,—of an assemblage of this sort, however long and complicated, it performs the office, by a single letter of the alphabet.

3. Where the assemblage of these abridgments of abridgments present themselves as susceptible of ulterior abridgment, of a line of any length composed of letters, with or without figures, it performs the office, it expresses the import, by means of a single letter; and so *toties quoties*.

From this function of algebra, the other, the *efficient* it may be termed, which consists in the solution of problems, in the performance of tasks proposed, in the rendering of services requested or demanded, is, as has been shown above, altogether different. To the last mentioned the former bears the relation of a means to an end.

By means of the relation which it bears to some quantity or quantities already known, to make known some quantity which as yet is unknown,—to this one problem may be referred all problems whatsoever, to which the name of algebraical can be applied.

For the accomplishment of this purpose on different occasions, different contrivances, over and above those which consist in nothing more than an abbreviated mode of expression, have suggested themselves to persons conversant

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with this art. In no instance, perhaps, certainly not in every instance, to the giving expression to these contrivances, are the modes of abridgment employed in algebra considered as a species of short-hand indispensably necessary.

As yet not even in algebraical, that abbreviated and technical language, has any mathematician, it is believed, unfolded, or so much as endeavoured to unfold, for the *boy*, what may accordingly still be called the secrets of his art.

Not even in abbreviated and technical language do we possess any such key constructed out of unabbreviated and ordinary language.

As to the abbreviative principle, algebra is not the only branch of the mathematics in which the abbreviative system or method is applicable with advantage. Though not in its whole extent, nor to anything near its whole extent, it is to a part of that extent applicable, and with like, if not altogether equal advantage to geometry. In Payne's Geometry, not to look for others, application is accordingly made of it, and with very considerable advantage.

If *abbreviation* were the only use of the function here distinguished by the appellation of abbreviative, it would follow that in the performance of the essential function everything which at present is not only customarily but exclusively expressed by the exercise of the abbreviative function is capable of being expressed without it,—may be expressed in a word in ordinary language. To any such purpose as the practice of the art, what is plain enough is, that by no such substitution could any advantage be gained; on the contrary, it would by the amount of the whole of its effect be disadvantageous. Instruction is the only purpose to which it could be made serviceable; but that to this purpose it might be rendered eminently, in a very high degree, serviceable, seems sufficiently evident.

In this case the same substitution of signs immediately expressive of general ideas, to signs immediately expressive of none but individual ones, would be the result, as has been already shown to be the result in the case of geometry; and in respect of intellection, and command of the subject, that result would be attended with the same advantages.

In this case the whole method of the art might be explained and taught,—the whole secrets of the art laid open, to an intelligent mind, without its being subjected to any part of that hard labour which must so unavoidably be bestowed upon the subject, before the signs and modes of proceeding, by means of which the abbreviation is performed, have been learned.

But supposing this done, the number of persons more or less acquainted with the principles of this art might be increased,—increased by the whole number of those who at present are repelled from it, by the formidable apparatus of magical characters now employed, by means of which the abbreviative function of it is performed. And when the principle of each distinguishable contrivance was held up to view in ordinary language, each principle characterized and fixed by an appropriate name, with a definition annexed, even the adepts themselves might, in the clearness and expressive generality of the language, find facilities according to the nature of the case, either for the invention of new contrivances, or for showing if such were the case, and as soon as it came to be the case, that the nature of the case admitted not of any others.

An observation which, it is believed, will be found general among mathematicians, is, that by the use of different inventions, contrivances, and expedients, from the number of years which even in the case of an amateur of this branch of art and science, would be necessary to carry him over the whole field of it, several years have been struck off, principally by the ingenuity of the French mathematicians. These applications of inventive genius, what then are they? To this question—and the whole field of the science cannot present a more important one—an answer might, if what is said above be correct, be given in ordinary language.

In the case of Algebra, (Fluxions included,) elucidation, if so it may be termed, though the same in respect of its end, will, in respect of the description of the means requisite to be taken for the accomplishment of that end, be somewhat different from what it has been seen to be in the case of Geometry.

In the case of Geometry, the enunciative parts of the proposition excepted, nor even they throughout the whole of the field—the language is particular, being, by the want of general terms, confined, in respect of the subject, to the individual figures and parts of figures exhibited by the individual diagrams, and designated—not by any indication given of their intrinsic and permanent relations one to another, but—by the arbitrary and unexplanatory denomination given to them by means of so many combinations of the letters of the alphabet. In this case, one great instrument of elucidation, therefore, consists in the substitution of terms expressive of general ideas, being those of so many sorts of relation, to denominations thus individual and unexpressive. But in the case of Algebra, the terms employed, abbreviated, and, to those to whom the use of them is not familiar, obscure and perplexing, are as general as it would be in the power of words—of words at length and unabbreviated, to make them. For generalizing designation, in the character of a new and as yet unknown instrument of elucidation, no room is left in Algebra.

But though of the application of the purely verbal expression employing principle the effect is not in Algebra, to add in any respect to the generality of the language, that, even in Algebra, it is capable of being made to act, and with very considerable effect, in the char-

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acter of an instrument of elucidation, seems scarcely to admit of doubt.*

It consists in simply forbearing to employ the algebraic formulæ or forms, while those explanations are going on, by which the rationale of the art and science is brought to view.

In the algebraic branch of mathematics, in idea at least, two sorts of operations, as above pointed out, may be distinguished—the abbreviative or condensative, and the effective or efficient. The abbreviative are but a species of short-hand: they perform, on the occasion of discourse applied to this particular subject, though with a degree of efficiency incomparably superior, the sort of function which the characters of which short-hand is composed, in relation to discourse at large, perform. In as far as this is the case, it follows that, in the exercise of this art, every particular contrivance, which does not consist in the mere employment of this general system of abbreviation, may as effectually and intelligibly be expressed in ordinary characters, and without this particular species of short-hand, as any other subject of discourse may be expressed in these same ordinary characters, and without the use of that species of *short-hand* commonly called short-hand, the use of which is applicable to every subject of discourse.

In regard to these abbreviative contrivances, what may very well happen is, that some apply principally or exclusively to this or that subject; to the solution of this or that particular problem or group of problems; and in so far the invention of the mode of abbreviation is the invention of the mode of solving the problem, and thus the abbreviative part and the efficient part are in a manner confounded. But, at any rate, it is not in every instance that this sort of confusion has place; and, on the other hand, a number there are of these contrivances for condensation, which are employed on all occasions alike.

True it is that, on the explanation given of the several substitutions by which the condensation is performed, the characters, the instruments themselves by which it is performed, cannot but be brought to view. But, for this particular purpose, no one of them need be brought to view more than once, or some other small and limited number of times; and between this use of them for the mere purpose of explanation, and the constant use of them through the whole of every page, how great the difference cannot but be to the mind of a young scholar, is sufficiently obvious.

By one passage, or some other small number of passages, consisting of the abbreviative forms or characters, every contrivance that belongs to the head of abbreviation may be explained; and even without so much as one such assemblage of uncouth forms, every contrivance, which does not operate as an instrument of abbreviation, or in so far as it operates otherwise than as an instrument of abbreviation, may be explained.

Prodigious would be the relief thus afforded to the uninitiated juvenile learner's mind, made by the indulgence thus afforded to his love of ease.

Under the head of Language-learning, the dark spot produced by every hard word, by every word which, being derived from a foreign language, has no relative belonging to it in the vernacular language, has already been brought to view. To an uninitiated eye, a page of algebra is a surface covered almost wholly with the like dark spots.

True it is that, for the explanation of the different contrivances, words in no small number that to the learner will be new, some of them already in use, others which it may be necessary to coin for the particular purpose here proposed, would be found requisite: and these new words will be so many hard words, so many dark spots.

But no sooner would one of these new words present itself, than a definition or explanation, composed either purely of common words, or partly of common words and partly of such peculiar words as had already, in this same way, received their explanation, would be subjoined. No sooner has the dark spot made its appearance, than the requisite light will have been thrown upon it: and how much more thickly darkened a portion of discourse is by unknown characters, than even by hard words expressed in familiar characters, few but must have experienced.

In the case of Geometry, the word *key* was confined in its application to such explanations as were annexed to particular propositions, or groups of propositions, over and above such explanations as, in the case of the demonstrative and preparatory parts of the several propositions, could not but result from the translation of the individualizing modes of designation employed, in so far as diagrams are employed with letters of reference, into the general expressions of which purely verbal discourse is composed.

In the case of Algebra, every paragraph in which the use of forms and characters were abstained from, would, in so far as it were instructive, operate as a key. For it would have as its object, either the explanation of the several contrivances of *abbreviation*, or of the several contrivances whereby these instruments of condensation were applied to practice and endeavoured to be put to use. Of no other sort of matter could it be composed; for, to the solution of the several problems, unless it be, in a few instances, as above, for illustration, the use of these forms would, of course, be necessary.

* There is here a frequent incidental repetition of views already discussed in, and properly belonging to, other departments of this Essay. It was written at considerable intervals of time, and the author sometimes overlooked the fact that he had already gone over the same ground.—*Ed.*

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In this case, as in that of Geometry, an additional instrument of elucidation would be afforded by the application of the use indication-prescribing principle, by the indication of the use, the practical use, derivable from the solution of the several sorts of problems, for the solution of which the Algebraic language is wont to be employed.

On this occasion it is not by any application which may be, or that has been, made of them that, in the sense here in view, they could with propriety be said to be put to *use*. Only in so far as it had been, or was capable of being made, subservient, either to some security or comfort in the business of ordinary life, whether immediately, or through the medium of this or that spot in the field of art and science, is it that the application made could with propriety be termed a *useful* one.

Take, for instance, the collection of articles intituled *Praxes*, or *Questions for Praxis*, subjoined to the English translation of Euler's Algebra. The number of them is 213. Of this number, a part more or less considerable, consist of a sort of jokes, named paradoxes, having the excitation of wonder manifestly for their effect, and perhaps for their only effect. In every one of them application is made of the Algebraic form, to the solution of some problem. But of these 213 problems, it is not from every one that, by any person, benefit in any shape, over and above the pleasure derivable from playing at this kind of game, seems capable of being received. The additional praxis, therefore, would be from this miscellaneous list to point out such as are in their nature applicable to beneficial use, and by indication of the occasion to show in what shape they are respectively capable of being put to use.

To answer the purpose of elucidation in the completest manner—understand always, with reference to the uninitiated—a key should not only have the effect of letting the reader into the heart (so to speak) of the contrivance, by which the proposed object is effected, the proposed advantage gained, but in the production of this effect the purely verbal mode of expression alone, unless it be with the sort of exception above hinted at, should be employed: the *purely verbal* mode; viz. in *Geometry*, to the exclusion of the *diagrammatic*, in Algebra to the exclusion of the *Algebraic*, characters and forms.

To what precise length it may be possible, with any degree of net advantage, to carry this principle of elucidation, which consists in the temporary exclusion of peculiar signs, is a question on which, antecedently to experience, it can never be within the reach of the most expert mathematician to pronounce. Thus much, however, may be asserted: viz. that the further the institutionalist can find means to carry on his system of instruction in this track, the greater will be the number of the learners whom he will carry with him.

To Geometry,—as it seems pretty well agreed among the learned,—to *Geometry* to the exclusion of, and in contradistinction to, *Algebra*, (including Fluxions,) is confined what may be called the *tonic* or *invigorative* use of Mathematics: the service done to mental health and strength by a sort of exercise by which the process of close reasoning is carried on, and to the performance of which close and unremitted attention is indispensable. It is in consideration of this use, that by some the Algebraic form is held in a sort of contempt, and that, in the immense class of occasions in that vast portion of the mathematical field which belongs to Geometry and Algebra in common, and on which the same conclusion may be arrived at by either track, the same problem effected in the algebraic mode is considered as done in the way of makeshift, and not productive of use or advantage in any shape, over and above what may happen to be attached to the solution of the particular problem for the solution of which it is employed.

This being admitted, although by the solution of a single problem in the algebraic mode, no such service could be rendered to the mental frame, as in manner above mentioned, may be rendered to it by the solution of the same single problem in the geometrical mode, yet by the indication of this or that particular contrivance, by means of which this or that class of problems may be solved in the algebraic mode, there seems little reason to doubt that, to the mental frame, a service might be rendered, though not exactly of the same sort, yet of a sort not to be absolutely neglected. In the Geometrical case, it is to the judgment and the attention, that the service would be rendered; in the algebraical case, it is to the conceptive and inventive faculty that the most immediate part of the service would be rendered.

The case of the uninitiated is here all along the only principal case in view. But, neither to the adepts does it seem that the mode of elucidation thus here proposed, would be altogether without its use. By the survey that would thus be made of the ground, in a point of view so new, it could scarcely happen but that in one way or other an increase of command would be acquired with reference to it, and new discoveries made in it such as otherwise, for a long time, if ever, might not have been made.

The sort of intellectual instrument, the key thus proposed, or rather the apparatus or collection of keys, would be very far from being complete, if in its purpose it did not include all the several fictions, which, in the framing of this branch of art and science, have been invented and employed.

For illustration, without looking any further, two may here be mentioned: viz., the conversion of the algebraical method into geometrical, and the contrivance, called by its

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first inventor *Newton*, and from him by British mathematicians the method of *fluxions*, and by its second but not less original inventor Leibnitz, and from him by the mathematicians of all other countries, the *differential and integral calculus*.

For the explanation of these fictions, and, indeed, for the justification of the use so copiously made of them, two operations would, it should seem, require to be performed. One is, the indication of the really exemplified state of things, to which the fiction is now wont to be applied, or is considered as applicable, the other is the indication of the advantage derived from the use of this the fictitious language, in contradistinction to the language by which the state of things in question would be expressed plainly and clearly without having recourse to fiction.

1. As to the conversion of the forms of Algebra into those of Geometry, or of the algebraic mode of expression into the geometrical. If in a case in which figure has no place,—as in a case where the quantity of money to be paid or received, or given under the name of interest for the use of money during a certain time, is the subject of investigation,—the geometrical forms should be employed, or the subject of investigation, thereby represented in the character of a portion of matter or space, exhibiting a certain figure, here a fiction, is employed: figure is said to have place in a case where it really has no place.

2. In cases where the geometrical form is the form in which the subject presents itself in the first instance, and the translation which is made is a translation from this geometrical form into the algebraical, here in this case no fiction has place: here what is done may be done, and is done, without any recourse to fiction; and as to the advantage looked for from this translation, an obvious one that presents itself is the abbreviation which constitutes an essential character of the algebraic form. In the opposite species of translation: viz. that from the algebraic form into the geometrical, fiction is inseparable. Why?—because when by the supposition figure does not form part of the case, figure is stated as forming part of the case. But when the translation is from the geometrical form into the algebraical, neither in this, nor in any other shape, has fiction any place. Why?—because, though in the case as first stated, figure has place, yet if reference to the figure be not necessary to the finding the answer which is sought, to the doing what is required or proposed to be done, the particular nature of the figure, is a circumstance which, without fiction, may be neglected, and left out of the account.

So in the case of the method of fluxions, which is but a particular species of algebra distinguished by that name.

Take some question for the solution of which this new method is wont to be employed. This question, could it be solved by ordinary algebra, or could it not? If it could, then why is it that this new method is employed? i. e. what is the advantage resulting from the employment of it? if it could not, then what is the expedient which is supplied by fluxions, and which could not be supplied by algebra?

In this method a fiction is employed: a point, or a line, or a surface, is said to have kept flowing where in truth there has been no flowing in the case. With this falsehood, how is it that mathematical truth, spoken of as truth by excellence, is compatible?

What is here meant is, not that no such fictions ought to be employed, but that to the purpose and on the occasion of instruction, whenever they are employed, the necessity or the use of them should be made known.

To say that, in discourse, fictitious language ought never, on any occasion, to be employed, would be as much as to say that no discourse in the subject of which the operations, or affections, or other phenomena of the mind are included, ought ever to be held: for no ideas being ever to be found in it which have not their origin in sense, matter is the only direct subject of any portion of verbal discourse; on the occasion and for the purpose of the discourse, the mind is all along considered and spoken of as if it were a mass of matter: and it is only in the way of fiction that when applied to any operation, or affection of the mind, anything that is said is either true or false.

Yet in as far as any such fictions are employed, the necessity of them, if, as in the case just mentioned, necessary, or the use of them, if simply useful, should be made known. Why? In the first place, to prevent that perplexity which has place in the mind, in as far as truth and falsehood being confounded, that which is not true is supposed to be true; in the next place, by putting it as far as possible in the power of the learner to perceive and understand the use and value, as well as the nature of the instruction communicated to him, to lighten the burthen of the labour necessary to be employed in the acquisition of it.

When for purposes such as the above, a survey comes to be taken of the field of mathematics, another object or subject of inquiry may be, whether in mathematics in general, but more particularly in algebra, fluxions included, the language is, in every instance, as expressive as it ought to be. Antecedently to association, with a very few exceptions for the designation of anything which is to be signified, any one sign is as proper as another. But when associations have once been formed, this original indifference is at an end: for the designation of any object, some word or phrase should be looked out, which, in virtue of some meaning with which they have already been invested, serve in some measure to lead the mind to the conception of the thing meant to be designated, and in that respect are better adapted to the purpose than any words taken

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at random: than any words, in short, between which and the object which is to be designated, no such relation has place.

Thence it is, that, for the idea, be the object what it may, the choice of the words employed for the designation of it, is never a matter of indifference; nor will there perhaps ever exist the case in which a number of words or phrases may not be found, all of them possessing, in respect of the designation of the object in question, so many different degrees in the scale of aptitude.

In the practice of Mathematicians, propositions of the geometrical cast, and propositions of the algebraical cast, are, to an extent which seems not to have been as yet determined, considered as interconvertible: employed indifferently, the one or the other, and upon occasion translated into each other. When, in the particular subject to which they are respectively applied, figure, although it have place, may, without inconvenience in the shape of error, or any other shape, be laid out of consideration;—in this case, instead of geometry, which, in this case, seems the more apposite and natural form, Algebra, if employed, is employed without fiction, and may, therefore, be employed without production of obscurity, without inconvenience in that shape; and, in proportion as the sought for result is arrived at with less labour and more promptitude, with clear, and peculiar, and net advantage.

But if, in a case in which figure cannot have place, as in the case of calculation concerning degrees of probability, as expressed by numbers, if any proposition be clothed in the geometrical form, so far will fiction have been employed, and with it, its never-failing accompaniment—obscurity, have been induced.

In the mind of him by whom they are employed, when the natural and individual ideas in which they have their source, and the individual or other particular objects, from which those ideas were drawn, are once lost sight of, all extensive general expressions soon become empty sounds.

In the use made of Algebra, at any rate, on the occasion of instruction given in this art to learners, the particular application which, either at the time in question, was made, or at any future time, was proposed to be made of it, should never be out of sight.

It is for want of this test of intellection—it is for want of this check, that, in books on Algebra, so many propositions, that are self-contradictory, and thereby void of all real and intelligible import, are to be found. Quantities that are *negative*, which, being interpreted, means less than nothing: and by the multiplying one of these quantities by another, that is, by adding together a certain number of these quantities,—a number of quantities equal to the product, and each of them greater than nothing, generated.

Algebraical language, even where, in the use made of it no fiction is involved, is a sort of abbreviated or short-hand language. So far, and so far only, as the abbreviated expressions which it employs, are, by him who employs them, capable of being, upon occasion, translated into propositions delivered at length, and in the form of ordinary language; so far, and so far only, as in the room of every such fiction as it employs, expressions by which nothing but the plain truth is asserted,—expressions significative, in a direct way, of those ideas for the giving expression to which the fictitious language here employed—were capable of being substituted, and accordingly are substituted; so far, and so far only, are they in the mouth or pen of him by whom they are employed, of him by whom, or of him to whom, they are addressed, anything better than empty sounds.

It is for want of all regular recurrence to these sorts of intellection, it is for want of this undiscontinued reference to unabbreviated and unsophisticated language, that algebra is in so many minds a collection of signs, unaccompanied by the things signified, of words without import, and therefore without use.

Employed on a number of different occasions, in so many different senses, and without any clear indication of the difference, or enumeration attempted to be made of these different occasions, the tissue of fictions involved in the use made of the negative sign, fills with obscurity the *field of quantity*, as the fiction of a debt where there is no debt covers with obscurity the field of commercial arrangement and commercial intercourse. See Tab I., Stage V., Book-keeping (p. 39.)

It was by an abstract consideration of the nature of the case (*i. e.* by a metaphysical view of the subject, as some mathematicians would incline to say, or a logical, as it might be more correct to say,) that this notion of the natural distinctness between the contrivances for abbreviation on the one hand, and the contrivances for the actual solution of problems, though with the assistance afforded by those abbreviative contrivances on the other, were suggested to the writer of these pages. It was with no small satisfaction that, for this same idea, he found afterwards a confirmation, and a sort of sanction, in the writings of two first-rate mathematicians, viz. a passage in Euler, adopted and quoted with applause by Carnot.—Euler, Mémoires de l'Academie de Berlin, Année 1754; Reflexions sur la Metaphysique du Calcul infinitesimal. Paris, 1813, p. 202.

Persons there are, says he, in whose view of this matter, Geometry and Algebra (la géométrie et l'analyse) do not require many reasonings (raisonnemens); in their view, the *rules* (les règles) which these sciences prescribe to us, include already the points of knowledge (les connoissances) necessary to conduct us to the solution, so that all that we have to do is to perform the operations in

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conformity to those rules, without troubling ourselves with the reasonings on which those rules are grounded. This opinion, if it were well-grounded, would be strongly in opposition to that almost general opinion, according to which Geometry and Algebra are regarded as the most appropriate instruments for cultivating the mental powers (l'esprit,) and giving exercise to the faculty of ratiocination (la faculté de raisonner.) Although the persons in question are not without a tincture of mathematical learning, yet surely they can have been but little habituated to the solution of problems in which any considerable degree of difficulty is involved; for, soon would they have perceived that the mere habit of making application of those prescribed rules, goes but a very little way towards enabling a man to resolve problems of this description; and that, before application is actually made of them, it is necessary to bestow a very serious examination upon the several particular circumstances of the problem, and on this ground to carry on reasonings of this sort in abundance (faire la-dessus quantité de raisonnemens,) before he is in a condition to apply to it those general rules, in which are comprised that class of reasonings, of which, even during the time that, occupied in the calculation, we are reaping the benefit of them, scarce any distinct perception has place in our minds. This preparation, necessary as it is that it should be before the operation of calculation is so much as begun, —this preparation it is, that requires very often a train of reasonings, longer, perhaps, than is ever requisite in any other branch of science: a train, in the carrying on of which a man has this great advantage, that he may all along make sure of their correctness, while in every other branch of science he finds himself under the frequent necessity of taking up with such reasonings as are very far from being conclusive. Moreover, the very process of calculation itself, notwithstanding that, by Algebra, the rules of it are ready made to his hands (quoique l'analyse en préserve les règles,) requires throughout to have for its support a solid body of reasoning (un raisonnement solide,) without which he is, at every turn, liable to fall into some mistakes. The algebraist, therefore, (le géomètre is the word, but it is in his algebraic, and not in his geometrical, capacity, that, on the present occasion, the mathematician is evidently meant to be brought to view); the algebraist, then, (concludes this Grand Master of the Order,) finds, on every part of the field, occasion to keep his mind in exercise by the formation of those reasonings by which alone, if the problem be a difficult one, he can be conducted to the solution of it.

Thus far this illustrious pair of mathematicians. Now these reasonings (raisonnemens) so often mentioned, and always as so many works or operations perfectly distinct from those which consist in the mere application of the algebraic formulæ, what are they! Plainly the very things for the designation of which the words, contrivances for the coming at the solution of the problem, or some such words, have all along been employed. Thus much, then, is directly asserted, viz. that the operations, which consist in the as it were mechanical application of this set of rules, which for all cases is the same, on the one hand; and, on the other hand, those which consist in the other more particular contrivances for solving the particular problem, or set of problems, in question, by the application of these same general rules, are two classes of operations perfectly distinct from each other. But, moreover, another thing which, if not directly asserted, seems all along to be implied, is, that, to one or other of these two heads, everything that is or can be done in the way of algebra is referable.

Of the descriptions given of these different contrivances and sets of contrivances, of this sort of materials it is, that, in as far as they apply to the algebraic (not to speak here of the geometric) method, all these *keys* and sets of *keys*, as employed by the hand of the mathematician, will have to be composed. But, these contrivances being in themselves thus distinct from the general formulæ, it follows that, for the explanation of them, language other than that in which these formulæ are delivered, may consequently be employed: other language, viz. (—for there is no other) that language which is in common use. And thus it is that not only to Geometry, but to Algebra, may the purely verbal mode of designation be applied, to give to the several quantities which have place in the problem, such a mode of expression, as by indicating the several relations they bear to each other, shall prepare them for being taken for the subjects of that sort of operation, which consists in the putting them in that point of view in which, by means of those relations, those quantities which at first were not known, but which it is desired to know, become known accordingly. This, when expressed in the most general terms of which it is susceptible, will, it is believed, be found to be a tolerably correct account of the sort of operation which, on each particular occasion, must proceed. No direct, and, as it were, mechanical application of the set of general rules. Of what, then, is it, that a sort of algebraic *key*, or *set of keys*, of the kind in question, must be composed! Of a system of abbreviations or directions by which it shall be shewn in what manner, in the several cases to which it is applicable, this sort of preliminary tactical operation may be performed, and to the best advantage.

As these two intimately connected yet distinguishable operations, viz. the application of the use-indicating (No. II.) and that of the key-presenting principle, went on together—

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the order of *invention*, i. e. the order in which the several propositions, or groups of propositions, come to be invented, would, in conjunction with the order of *demonstration*, i. e. the order in which, for the purpose of demonstration, it is either necessary or most convenient that they should be presented, be brought to light.

But in proportion as the order of invention came thus to be detected and displayed, in that same proportion would it be rendered manifest that theory was formed, and in what manner it was so formed, by abstraction, out of positive ideas; more and more general out of particulars; and, in a word, originally out of individual ones.

Supposing the whole field of Geometry, or, in a word, of Mathematics, measured and delineated upon this plan, what would, in that case, be signified by the word *understanding*, in such phrases as these, viz. he understands plain elementary geometry, he understands conic sections, or, in general, he understands the subject, would be a state of mind considerably different from that which at present is indicated by these same phrases, and accordingly, in the signification of the words learning and teaching, as applied to the same subject, the correspondent changes would be undergone.

VI. Field of Mathematics—need of a general revision of it, for the purpose of Chrestomathic instruction.

Should there be any person, in whose eyes any of the observations above hazarded afford a prospect of their being conducive, in any degree, to the wished for purpose, to that same person a general revision or survey of the whole field of the science, with a view to the same purpose, may, perhaps, present itself as a task neither altogether needless nor unpromising.

In this, as in every other track of art and science, invention and teaching what has already been invented, are very different operations; and, for the performance of them to the best advantage, talents, in some respects different, and, at any rate, different situations, will, in general, be found necessary.

To the removal of the difficulties by which, in the minds of the generality of learners, progress is most apt to be impeded, a strong and clear sense of them is at least useful, if not indispensably necessary: and the larger the possession a man has of that sort and strength of talent by which he is qualified for invention, the less strong will be the impression left by any such difficulties on his mind.

Placed on the threshold of the science, upon crossing the track of it, a little verbal inaccuracy, which, to the eyes and feet of an adept standing in the higher regions, will, like a thread of gossamer, be an object altogether imperceptible, will, in the eyes of many a learner, be, if not an insurmountable bar, a troublesome, and, for a long time, a disheartening, stumbling-block.

In this part, as in so many others of the field of art and science, dazzled, not to say blinded, by the splendour which encircles a great name, professors have scarce suffered their eyes to be opened to see anything like an imperfection in the object of their admiration; and hence it is that so long as it affects not the substance—the very vital part, of the art and science, inaccuracies by which, though imperceptible to proficients, learners are put to torture, might, if searched for by eyes wholly unprejudiced, be found, it is believed, in greater numbers than is commonly so much as suspected.

For illustration, and as far as they go, even for demonstration, the following examples, taken from each of the three great divisions of Mathematics, viz. Geometry, Algebra, and Fluxions, no one of them requiring, for the conception of it, any the smallest degree of proficiency in the science to which it belongs will, it is believed, be considered as neither irrelevant nor unsatisfactory.

Euclid, Euler, and Newton,—men of no less account than these, will each of them be seen to afford an example of the sort of relation, and hitherto imperceptible, but not less operative sort of imperfection here in view: Euclid in Geometry, Euler in Algebra, Newton in the world of his own creation, Fluxions. If in the greater number, or in all these instances, the seat of imperfection should appear to belong rather to Logic or Grammar, than to Mathematics, neither the inconvenience to the learner, nor, consequently, the demand for indication, will by this circumstance be at all diminished.

In regard to Geometry, on the occasion of the exemplifications, which have already been mentioned, and for which reference has been made to the Appendix,* three have already been brought to view.

But those which are seen are but three out of a much greater number of imperfections, real or supposed, which, in the course of the inquiry already mentioned, the pair of self-teaching learners detected or supposed themselves to have detected. Without an adequate motive no labour at all, much less any course of labour so persevering as that which was here necessary, was ever undertaken; and on this occasion, in the character of an adequate motive and efficient cause, none presented itself as being so analogous, or in all respects so promising, as the sort of triumph which, in every instance, would follow upon the supposition of success. Many of these supposed triumphs the then adviser remembers to have been occasionally reported by these two pupils, if, on the ground of a few general hints, furnished at the outset, pupils they could be called: and sometimes it was the Grecian sage, sometimes his disciple, Simpson; some-

* Vide supra, p. 159, note.

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times both the one and the other, that were thus dragged, in imagination, at the tail of the audacious stripling's car. For one most lengthy and perplext proposition, viz., the enunciative part of it on the subject of proportions, Simpson, who, in his quality of modern, could be treated with the less ceremony, Simpson, it is perfectly remembered, was not only drawn and quartered, but gibbeted.

Next, as to Algebra.

A seeming paradox, not to say absurdity, in which many a mind, it is believed, contrives even now to be entangled, is the rule, according to which, the product of two negative quantities, multiplied by each other, each of them less than nothing, (for in that mystery this other is but included in part,) produce a positive quantity; yea, verily, and that altogether as great as if they had both been positive.

In the third chapter and thirty-third Article of his Algebra, Euler, when he has observed that, by the multiplication of a positive by a negative, or of a negative by a positive, quantity, the product is still negative; and therefore, if the product of two negative quantities were not positive, it would be the same with these, thinks he has made the matter sufficiently clear. That the conception remaining in the mind of this adept, after the utterance of these words, was abundantly clear, need not be doubted; and no less clear would it have been whatever other words it had on this same occasion happened to him to employ. But, as to a learner, taught by such a demonstration, the chances seem many to one that his tongue would be silenced; yet, the chances seem, at least, as many that his mind would be rather darkened than enlightened.

Fortunate it is, on this occasion, for the learner in Algebra, if, being an Englishman, it is through the medium of the translations that have been made into his own language, that he betakes himself for instruction to that celebrated work. At the end of the first volume are inserted a number of notes, some by a former translator of the work from German or Latin into French—some by the translator into English. In the second of these notes, should perseverance have carried him thus far, or fortune set him down at the place, the learner will find what light the subject admits of, thrown upon this the original darkness. Without employing the gloom of Algebraic characters to throw again their darkness upon this first light, a short passage or two, extracted from two pages, may suffice to afford to the intelligent though uninitiated, unmathematical reader, a clue which, if not immediately, will, it is believed, with the help of a little reflection, lead to a solution of the paradox.

"The taking of a negative quantity negatively destroys" (says the intelligent annotator) "the very property of negation, and is the conversion of negative into positive numbers." Of the non-conception or misconception, so apt to have place on this subject, he thus points out the cause. "Multiplication," (says he,) "has been erroneously called a compendious method of performing addition:" (which it might without impropriety be called when the quantities are both positive,) "whereas," (continues he,) "it is the taking or repeating of one given number as many times as the number by which it is to be multiplied contains units. Thus (any number multiplied by one-half) 9, for instance, multiplied by $\frac{1}{2}$, means that it is to be taken half a time;" (*i. e.* that of that same number the half is to be taken instead of the whole.) "Hence," (continues he, a little further on,) "it appears that numbers may be diminished by multiplication, as well as increased, in any given ratio, which is wholly inconsistent with the nature of addition."

Happy as the young Algebraist may have reason to think himself, if perseverance has thus carried him to the end of the first and longest of the two stages into which the road is divided, it will have been still more fortunate for him, if at the very place at which, by the obscure exposition, he has at the very threshold of the science been, as above, tormented, it has by any means happened to him to be conducted to that other spot, at which light is let into the subject, and satisfaction substituted to perplexity. True it is that, drowned in a flood of Algebra, a figure of two, being the same which is prefixt to the note, may, after the flood has been dragged, upon a close inspection be found. But, in point of fact, how stands the matter of reference? It is by the note itself that the eye was conducted to the reference in the text. By that reference it was not, nor probably ever would, have been conducted to the note.

Here belongs a practice, begun, it is believed, as well as continued, in Scotland, and but too much copied in England,—the throwing the matter of elucidation to a distance from the matter to be elucidated. The consequence is, that many, at the suggestion of indolence, refuse from first to last to go a-hunting, time after time, in quest of the light thus proffered, but, at the same time, hidden under a bushel; while others, groaning under a toil thus causelessly imposed upon them, purchase or leave unpurchased, at the humour of the moment, the light with which, without any additional expense to the writer, they might have been accommodated, without being thus made to pay for it.

Lastly, as to *fluxions:* a modification of the algebraic form,—a mode of calculating invented under that name by Newton,—under the name of the differential and integral calculus, by Leibnitz, whose denomination is employed in every language but the English.

The original work of Newton is not at present within reach. But the word employed on this occasion in English, being in all English books the same, no such suspicion can arise, as

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that in the use of so elementary and radical an expression, any departure from the language of the great master can have had place.

In a logical and grammatical point of view, this word is not exactly the word which the object intended to be denoted required for the expression of it: instead of the clear idea meant to be conveyed, to an unpractised mind the idea presented is very apt to be a confused one: a confusion by which the very first steps taken on this ground are but too apt to be involved.

By a word or two of explanation, this confusion might have been effectually dispelled; but nowhere is any such explanation to be found.

The agent or operating instrument of action, and the product or result of it, in as far as the operation is effective; on every occasion both these entities are as necessary as they are distinct and distinguishable from each other. But owing to the poverty of the language, or to the want of clear discernment on the part of the generality of those who begun and of those who continue to use it, the two last of these objects are apt to be confounded under one name.

To the above examples, though in this case on particular great name, no individual mathematician can be brought to view, that no branch of mathematics may want its exemplification, may be added a source of confused conception, observable in the lowest field of mathematics, viz. arithmetic.

Square root, *cube* root: of the objects which these expressions are employed to signify, that in the head of many a student the ideas obtained remain from first to last in a state of confusion, is a proposition, the truth of which would, it is believed be, upon inquiry, but too abundantly exemplified.

Square-root, *i. e.* root of the square: just as we say, fountain-head, house-top. In a book of instruction, suppose an explanation to this effect were subjoined upon the first mention of this compound appellative, many a scholar's mind, it is believed, would be saved from a load of perplexity and confusion under which at present it has to struggle.

Or without the explanation, short and simple as it is, suppose the hyphen and no more inserted, as above, between the two elements of this compounded appellative, this, if it had not of itself afforded a complete solution of the enigma, would, in many instances, have afforded a clue to it. Accordingly sometimes, though not constantly, this simple though of itself inadequate instrument of explanation is inserted.

For want of such an explanation of the two adjuncts, viz. square and cube, thus applied, what in many a mind is at present the effect?

Square root and cube root, two different roots belonging to the same imaginary plant. Square root, as being that one of the two which is of the most frequent occurrence, a root, such as that of the common radish, which runs out into length, made square, viz. as it might be by four strokes of a knife made in proper situations and directions.

Cube root, a root of another shape, such as that for instance of a turnip radish brought into the shape of a cube or die by four such strokes as the above, with the addition of two others, viz. at the top and bottom of the radish.

Matter is infinitely divisible, matter is not infinitely divisible—both these propositions cannot be true, one of them must be true: which of them is true it is scarce possible to prove. For the present purpose, let the latter be supposed to be true; true or not true, it is rather more distinctly conceivable than the other; and for the present purpose the only one that can serve. For the present purpose, then, let it be supposed true.

On this supposition, all matter is composed of *atoms*, and all of them of the same size.

These smallest existing atoms, suppose them, all or some of them, *cubes*—so many perfect *dice*. These dice may be conceived to be composed each of them of a determinate number of particles of the same form, which though never in fact separated, may as easily be conceived to be separable and separated as if they really were so. These component particles, call them *points*: and let the number of them be exactly 512. Ranged in a column regular, eight of these points make a line; the lines being all of them *straight* and ranged in appropriate order, one above another, eight of them, each containing eight *points*, make a *surface*—a surface of a square form, such as that exhibited by a chess-board; and ranged again in a correspondent order, eight of these chess-board surfaces compose the atomic *cube* or die.

The sixty-four points first mentioned, points which thus placed in the due and correspondent order—in the order adapted to the purpose, exhibit the superficial *figure* called a square; the square composed of these sixty-four stands upon, and placed in any direction, has for each of its sides, (of which the square placed in a certain position, may be called the base,) the line composed of eight of these points. The whole atom is composed of eight of these squares, piled one upon another, constituting a *cube*, having for its base the *square* first mentioned.* The number contained in the cube is then with relation to each of the lines of each of these squares, a cube, containing eight times as many of these points as any one of the squares contains; each such square, containing eight times as many points as any one of its component lines contains.

Eight, the number of the points in each of

* Of these conceivable ultimate particles, eight ranged in proper order exhibit the figure of a line; eight such lines, containing sixty-four such particles, the figure of a square; eight such squares, containing sixty-four such lines, and 512 such particles, the figure of a cube or die.

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these lines, is the cube root of 512, the whole solid composed of 512 such points, the whole number of the points contained in the solid *atom*, the form of which is, by the supposition, that of a cube or die: eight, this same number, eight, is at the same time the square root of sixty-four, which is the number of the points contained in each of the surfaces by which that *atom* is bounded; the form of each of which is by the supposition the form of a *square*.

As often as in any institutional work in mathematics an explanation of these terms square root and cube root is undertaken to be given, the figure of a square at least is, it is believed, exhibited; and for the representation of it a number of points or lines are employed.

But nowhere, it is believed, is the explanation so full as above; nor in the giving it are the points put together in such a manner as to present the idea of a cube. Yet this cube being, of all the entities in question the only one which, in a separate state has, in the nature of things, its exemplification, the ideas of a surface, a line, and a point, having, respectively, been deduced from the idea of this solid in the way of abstraction, the consequence seems to be, that when images come to be exhibited, the image of a cube ought no more to have been omitted than the image of a square.

Neither is it very distinctly explained why or how one of the surfaces by which a cube or die is bounded, comes to be considered as constituting the root of it; nor why or how one of the lines by which one of these surfaces is bounded, comes to be considered as constituting the root of that surface.

Supposing these matters to admit of explanation, the explanation it is believed will be to some such effect as this: Take a die and set it down upon a table resting on any one of its faces or surfaces—suppose that which is marked with *one* spot—then suppose the die to be a plant, that surface may naturally enough be considered as representing the root of the plant. Of any figure approaching to that of a die, true it is that no plant has ever yet been found. But of a figure approaching very nearly to that of a hemisphere, such as that which might on all sides be contained exactly within the compass of a die, of correspondent dimensions, plants have actually been found, witness a species of the genus *cactus*.

In like manner, in a vertical position, at right angles to the table, set up a *chess board*, composed, as above, of the rows of squares of which it (this square figure) is composed; the lowest, *i. e.* that which is in contact with the table, represents that boundary which in geometrical language is frequently called the base of the square; and which in the language of arithmetic, as above, may be termed the root of it, bearing, as it does, the same relation to the number of lines contained in the whole surface, as the number of lines contained in the whole surface bears to the number of lines contained in the whole solid, termed, as above, a *cube* or *die*.

Simple as the above explanation is, and useful at least as it seems to be for the obviating confused conceptions and misconceptions, such as those of which the above exemplifications may serve as a sample, no such explanation will, it is believed, be as yet to be found in any institutional book.

Unfortunately, coupled as it is with the expressions used for the designating of the other objects that are so closely related to, and inseparably connected with it, the word *root*, considering the material image which it cannot fail to present, and which if it did not present, it would be altogether insignificant and inexpressive, seems not very happily suited to the purpose.

In correspondency with the word *root*, is employed the word *power; root* being, in a certain proposition, indicative of *decrease; power*, in the same proportion of *increase*. Here, with no other difference than that between *decrease* and *increase*, the objects themselves match exactly. But the symbols that are thus employed for the designation of those same objects, very badly do they match with each other.

1. No image correspondent in any way to that which is exhibited by the word *root*, is exhibited by the word power. With the correspondent idea, for the expression of which the word *root* is employed, it has no analogy; it does not match with it: of itself neither of them has any tendency to call up to mind the other.

2. On the other hand, power has the advantage, and an indispensable one it is, of carrying the increase to any number of degrees, and consequently the length, say also the height, to any extent that can be desired.

On the other hand, when for expressing *decrease*, and thus, in the scale of magnitude, *descent*, you employ the word *root*, at the first step in the line of descent you have the *square* root; at the next, the *cube* root; but there your stock of roots, of different species of roots, each less, and running down lower than the preceding one, is at an end.

In one point of view, and *that* the main one, *power*, it is true, is not ill adapted to present the ideas that belong to the subject. The idea of power includes in it the idea of the effect produced or producible by the operation or action of that power; and the greater the quantity of power, the greater will be expected to be the quantity of the effect. Whatsoever be the number in question, by the quantity expressed by the term the *third power*, of that same number, the effect producible, be it of what nature it will, will be greater than the effect producible by the quantity expressed by the term the *second power* of that same number; taken in this point of view, of two numbers employed for giving expression to two powers of different magnitude, the greater will therefore be expressive of the greater power.

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But taken in another sense,—as resulting from another of the sorts of occasions on which it is wont to be employed,—another sense, and that to many minds a more familiar one, of any increase of the number attached to the word *power*, the result will be the idea not of increase but of decrease. Apply it, for example, to statistics. What is meant by the first power in Europe? Is it not that which is capable of producing the greatest effects? What is meant by the second power in Europe? Is it not that which is not capable of producing any effects but such as will be less than those producible by the first power? and so on, the greater the number the less the power indicated by it.

Though, as above, in itself and of itself, were no correspondent and apposite idea required to be expressed along with it, *power* might, have been not altogether ill adapted to the purpose; yet this incapacity of finding its match in any other word, is such an objection to it as seems insuperable and conclusive.

Retaining the word root for giving expression to *decrease in quantity and descent in altitude*, suppose that for giving expression to *increase* and *ascent* in the same proposition, the word branch were employed. *Branches* ascending in the sky, we might have as many as powers; descending, *roots* we might have as many as *branches; roots,*—not *square* roots and *cube* roots indeed,—after which our stock of roots would be exhausted; but first roots, and second roots, and third roots, and so on, down to the centre of the earth; exactly as many as branches; for every *branch* a root, wherever a root were wanted; for every *root* a *branch*, wherever a *branch* were wanted.

The plain and standard number, neither multiplied by itself nor divided, neither increased nor diminished, shall it be root or branch, or both, or neither? Keeping still to the same figure, shall it not be trunk? Second root will then be to *trunk*, what trunk will be to second branch. In this case, as in the case of logarithms, there are points which would require to be settled.

To the use of the word *branch* an objection not unanalogous to that which, as above applied to the word power, does, it must be confessed, present itself. In the ascending series of branches, the greater the number employed in giving expression to any term in the series—in a word, to any branch,—the greater should be the effect of any portion of matter taken in that number, repeated the number of times indicated by that numerical *denomination:* the effect producible by the third branch of the number should be greater than the effect producible by the second branch of the same number and so on. But, in the case of the class of material beings, from the sensible properties of which the image is deduced; in the case of a tree, (for example,) the higher the branch is, it is not the *stronger* the more powerful, but the *weaker* the less powerful; and it is by the *greater* number that the higher branch will be presented to view; and, in particular, no branch can fail to present itself as being in a greater or less degree weaker, instead of stronger than the trunk.

Here, then, applying to the word *branch* is an objection analogous to that which we have seen applying to the word *power:* analogous to it, and perhaps equal to it.

But, when the one objection is set against the other, there remains in favour of the word *branch*, the circumstance of its being analogous, to the word *root*—the word already in use to designate in corresponding propositions the correspondent and opposite effect.

What must be confessed is, that supposing the superior aptitude of the proposed new terms, when compared with the old established terms, were ever so unquestionable, the utility of any such undertaking as that of substituting in any institutional work, or scheme of oral instruction, the new to the old, would still be very questionable. It is in the terms now in use for the designating of the ideas in question, that all the existing works on the subject stand expressed: these works could, therefore, no further be understood, than in as far as the terms here in question are understood.

But how conclusive soever this consideration may be, in the character of an objection to any such attempt as that of substituting these new terms to the old established ones, it applies not in the character of an objection, to the adding, in a scheme of instruction, to an explanation of the old, an explanation of the new. If, therefore, the ideas presented by the proposed new terms should, in any instance, be found clearer than the ideas presented by the old, here will so much new light be thrown upon the subject, without any of the inconveniences so frequently, if not constantly, attached to change.

Nor would the preferable use of the new language be altogether incompatible with the reaping the instruction contained in the books in which the old terms are employed. All along, since the days of Newton and Leibnitz, while, in the English school, the terms *fluent* and *fluxion*, with their appendages, have been employed,—by the German and French schools, for the conveyance of the same ideas, the terms integral and differential, with their appendages, have been employed.

A principle of nomenclature so inadequate—a principle by which neither multiplication nor division could be carried on more than two stages, how came it to be adopted? To what cause shall it be ascribed? Obviously enough to this, viz. the continual conversion of the algebraical and the geometrical forms into each other. In geometry, when from your point you laid down a line, when from your line you had erected your square, and on your square you had erected your solid in the form of a cube, then you found yourself at a stand,

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no other ulterior dimensions did the nature of things afford. So much as to the scale of increase. So, on the other hand, in regard to roots. In the *square* you possessed a figure, of which the metaphorical root represented by any of its boundaries, might be found; in the cube you possessed another figure, for which a still deeper root, viz. the same by which the root of the square had been represented, might be found. But, the nature of things not affording anything more solid or substantial than a cube, there ended also the corresponding line of roots. So much as to the scale of decrease, for in the number called a *square* number, in other words, in the second power of that (the correspondent) number, or in the first branch of that same number, considered in the character of a *branch*, Geometry affords an image capable, in some sort, of representing it; so likewise in the number called a cube number. But, at that point the representation, and, consequently, the interconvertibility ends; at that next point you come to the third power, or the second branch of the number in question, and to *that* the stores of Geometry afford not any correspondent image.

Here, then, may perhaps be seen the cause of this obscure and imperfect portion of nomenclature. But, by the indication thus given of the cause of the imperfection, the inconvenience resulting from it is not by any means diminished; nor, therefore, the demand for the application of such remedy as the nature of the case admits of.

In the case of this science, as in the case of so many other branches of art and science, the knowledge which the artist, or man of science possesses, in relation to the subject, is derived from the several particulars of detail which belong to the subject, from the acquaintance which continual practice has given him with these several particulars. The ideas which, from these several particulars it has happened to him to derive and store his mind with, are perhaps, without exception, clear ones. On the several occasions on which these particulars have been brought to view and spoken of, spoken of in language which, in the mind of him by whem it has been employed, has all along had clear ideas for its accompaniment—the language attached to the subject by usage has, of course, been all along employed. In the mind of this artist, or man of science, by whom this current language is employed, it is all along conjoined with clear ideas. The conclusion which very naturally, however erroneously he forms in his own mind,—forms all along, as a matter of course, and in such a manner as he would move his legs in walking, almost without thinking of it—is, that in the minds of other persons, in the minds of learners, ideas similarly, if not altogether equally, clear, will be attached to this same language.

But in the minds of persons in general, and of young scholars in particular, the phrases in question have no such accompaniment; with the particulars belonging to the science they have no such already formed acquaintance. When, therefore, without sufficient warning, perhaps without any warning at all, of the impropriety of the application thus made of them, the phrases in question are by the teachers in question (through which soever of the two modes of conveying his instruction, viz. discourse scriptitiously or discourse orally delivered,) employed in the delivery of instruction in relation to the art or science, the consequence is, that, instead of ascribing to them the latent and multifarious meaning which, by long practice and acquaintance with particulars, the teacher has learned to attach to them, the meaning which he, the learner, attaches to them, is no other than that which has been attached to them by the usage of ordinary language. When, with the assurance so naturally attached to the possessor of acknowledged and undisputed infallibility, he is told that every number which is brought to view, to which the sign called the negative sign is prefixed, is expressive of a quantity which is, and exactly by so much as the figure indicates, less than nothing, the belief of the existence of an infinite number of quantities, each of them less than nothing, is thus added to his creed.

When, again, after having been required to take one of these quantities that are by so much less than nothing, and multiply it by another of these quantities that are less than nothing,—two, for example, by three—the product is composed of a number of quantities, all of them greater than nothing, viz. six in number (being exactly the same number of quantities, all greater than nothing, that would have been the result, if, instead of quantities all of them less than nothing, an equal number of quantities, all of them greater than nothing, is employed;) what is the consequence? We remain astonished and confounded. But the more astonishing the matter of science thus imbibed, the greater the glory attached in the acquisition of it; and to comfort the learner under his confusion, is the use and benefit of this glory, the glory of having, by dint of hard labour, succeeded in treasuring up in his mind, under the name of science, this mass of palpable nonsense.

A determination (suppose) is taken to substitute, on this ground, the language of simple truth for the language of scientific falsehood, and thereby to substitute light for darkness. For the production of this effect what is the course that a man will have to take? On the occasion of every sort of transaction, operation, event, or state of things, in which this sort of fictitious language is in use to be employed, he will have to bring to view the nature of the transaction, operation, event, or state of things, and, at the same time, to bring to view the effect which the supposed existence of some supposed negative quantity is productive of. Of this transaction, operation, event,

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or state of things having given an indicative description, employing, in so far as susceptible of application to the subject, the terms of ordinary language, he will thereupon, in the like language, give an indication of the effect so produced by the negative quantity, as above. So far as this mode of explanation shall have been made to extend, so far, and no farther, will the science have been brought and put into that state in which it ought to be put for the instruction of the young beginner; into which it must be put before it can have been fitted for rendering more than a very small part of that quantity of service which, in its own nature, it is capable of rendering to mankind.

In what circumstances shall we look for the cause of so apparently extraordinary a phenomenon; such flagrant impropriety, inappositeness, falsity, and thence so thick a veil of factitious obscurity in the language of science? Of inappositeness, impropriety, falsity, in that science, of all others, which reckons infallibility in the number of its pretensions; of which infallibility is commonly regarded as the unquestionable and exclusive attribute?

In as far as language which, on ordinary occasions, is used in one sense, is, on the occasion of scientific instruction, used in another, an effect similar to that which, by the species of secret discourse called *cypher*, is produced in any mind which is not in possession of the *key*, is produced in the mind to which instruction in the science has lately begun to be communicated.

To him who is in possession of the key, the language of the cypher, obscure, mysterious, and perhaps nonsensical, (as to the conception of this very person it would be otherwise,) is clear, correct, and instructive. But does it ever happen to him to entertain any such expectation, that to any person who is not a possessor of that necessary instrument, it should present itself in that more satisfactory character? So soon as any such persuasion to any such effect were entertained by him, so soon would an assurance equally strong be possessed by him that the purpose for which alone the language had with so much pains been devised, was already defeated.

To the experienced instructor, the particulars which he has been accustomed to have in view on the occasion of which the technical and inapposite language in question, which, and which alone, in speaking of the subject, it has been usual to him to employ, and have employed, is the cypher: to this cypher the particulars which, on these same occasions, it has been usual for him to have in view, compose the *key*. What wonder if, among those to whom, while not yet in possession of the key, the cypher comes to be pored over, the number of those to whose minds the words of the cypher have imparted clear ideas, is comparatively so inconsiderable.

By a comparatively small number of privileged minds, to the constitution of which the subject happens to be in a peculiar degree adapted, at the end of a certain number of years thus employed, an acquaintance with the science—an acquaintance more or less clear, correct, and extensive—comes to have been attained. Attained! but how? by means of the cypher? by means of the inapposite, the ill-constructed, the fictitious language? No; but in spite of it. Instead of being left to be drawn by abstraction, like Truth out of her well, from the bottom of an ocean of perturbers, had the key been conveyed, in the first instance, and terms of compact texture constructed out of apposite, familiar, and unfictitious language, a small part of the time so unprofitably employed would have sufficed for extracting from the subject a set of conceptions much more clear, correct, and extensive, than those obtained by a process so full of perplexity and inquietude.

To no man can any truth, or set of truths, the effect of which is to prove and expose the vanity of any part of that treasure of science, real or pretended, in which he has been accustomed to place any part of his title to the expectation of distinction and respect, be naturally expected to be otherwise than unacceptable. In no better light than that of an enemy can the author of so unwelcome an importation be regarded. By the feeling of the uneasiness thus produced, the passion of anger directing itself toward the immediate author of the uneasiness, will be produced; and with it the appetite for vengeance. To the gratification of this appetite, the readiest instrument which the nature of the case will, generally speaking, be found to present, will be the imputation of ignorance: matter by which an imputation of this sort may be fixed will of course be looked out for, and never does it fail to be looked out for with a diligence correspondent to the provocation given, and the temper of the individual to whom it has been given. Ingenuity is set to work to devise by what means the dart cast at the mind may be rendered most sharp; the wound deepest and most afflictive.

But by no such artifices will the mind of a judicious reader be led astray from the view of the proffered benefit. By the means indicated, or by any other means, is the art of teaching, as applied to the branch of art and science in question, susceptible of being improved? If so, whether on the part of him by whom any useful and practically applicable means of improvement have been suggested, the marks of ignorance be more or less palpable, or more or less numerous, are questions not worth a thought.

To the man of science, in whose breast the predominant affection is not the self-regarding love of reputation and desire of intellectual fame, but the social affection of philanthropy, observations which have for their tendency, as well as their object, to put him on his guard against those different propensities which, with

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more or less power and effect, operate in every human breast, will be regarded, not as an injury but as a service; will be received, not with anger, at least not with any durable emotion of that kind, but rather with complacency and thankfulness. He will find himself thus put upon his guard against an intestine, against a latent and insidious, enemy.

On the occasion of propounding any extensive plan of useful instruction—in this, as in every other walk of useful art and science, the lover of mankind will propose to himself two main objects: the one to maximize the quantity of use capable of being derived from it, the other to maximize the facility, and thence the promptitude with which each given portion or degree of it may be rendered obtainable. *Usefulness* and *facility*, by these two words, may be expressed the main objects of his regard.

Long after these, the advancement, in as far as that is distinct from usefulness; long after these, though still not as an object to be neglected, will the mere extension of science, that science being but a speculative one, rank in his estimation and endeavours.

VII. *Interconversion of Geometry and Algebra.*

In speaking of Geometry and Algebra—of Geometry in the first place, of Algebra in the next place—thus far it has been necessary to speak of these two objects, as if they were so many distinct branches of mathematical art and science; one of them, and that alone, applicable to one sort of subject or occasion; another, and that alone, to another. But, to his surprise not improbably, and to his no small annoyance certainly, the learner will sooner or later have occasion to observe, that, in point of practice, no such separation has place; and that, for the obtaining of one and the same result, for the solution of one and the same problem, for the finding an answer to one and the same question, for the demonstrating the truth of one and the same assertion, for instance, in the way the problem in question* has been solved, both these branches of mathematical art and science have been employed at once; and that, for the arriving at no more than one conclusion, he will have to feel his way through the two distinct sorts of labyrinths, the labyrinth constructed out of the capitals of the letterpress alphabet, or the field of geometry; and the labyrinth constructed out of the small letters of the same alphabet, in the field of Algebra, with dots put over some of them, in the upper quarter of it, if in the part occupied by the Newtonians; and d's put before as many of them, if in the part occupied by the Leibnitzian corps. Accordingly when, after leaving out a swarm of other lines, he has learned that, for the designation of the line which, in the first place, he is in search of, two of these capital letters have been appointed, a supposition which he will naturally be led to make is, that now he has formed with it that sort of acquaintance which will be sufficient for the purpose. Not he, indeed; for too soon, whenever it is, for his peace, will he find it snatched out of his hands, and thrown into the algebraic mill, out of which it will not come without having stamped upon it a new name, made out of a *single* letter of the alphabet, and that a small one; and so with regard to all the other Geometric personages, for giving names to some of which, nothing less than three, or even more than three, of these letters a-piece, will suffice.

Of so troublesome a repetition of labour, especially on a branch of the field of art and science, of which, by means of the abbreviative and condensative forms, saving of labour is acknowledged to be the grand instrument, wherein consists the use? To what cause is the usage that has taken place in this matter to be ascribed? To find any answer to this question, the new search that has been made in the works of mathematicians has not been attended with success.

One effect seems inseparably to follow, of course, from the very nature of the two modes; and that is, that the mode of expression which, in the geometrical mode is, by the references to the individual diagram, confined to that individual diagram, and thus reduced down (narrowed, to the minimum or maximum shall we call it of narrowness) is, in the algebraic mode, and for the opposite reason, *generalized*, or, to use an expression more conformable to the language of logicians, *universalized*; and, to this circumstance, without our being always if ever fully aware of it, may frequently, perhaps, be found the cause, not less real, how imperfectly soever perceived, of the trouble taken to translate the preparatory and demonstrative part of the proposition out of the geometrical form into the algebraic.

Then why not translate it at once into the ordinary unabbreviated language? In answer to this question several reasons may be given, none of them unapt.

1. Of one of the most obvious of them, intimation is already conveyed by the word unabbreviated. Abbreviation is the main characteristic of the algebraic mode of notation, as distinguished from the simply arithmetical.

Applied in so many cases where it was in a prodigious degree, beneficent, habit would suffice to cause it to be applied to other cases in which the employment of it would not be attended with any such advantages.

2. Be it of what kind it may, an instrument which, after much trouble, a man has at length succeeded in rendering himself expert in the use of, he is naturally fond of playing with; love of power and love of admiration,—both these appetites find their gratification in it.

3. By this symbolical, in contradistinction

* This seems to have been meant to follow some exemplification which has not been found among the MSS.—*Ed.*

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to the *purely verbal*, mode of designation, much embarrassment and difficulty is saved; and, in lieu of a variable, an invariable mode of expression is employed. For framing the expression in the purely verbal mode, how much more effectually soever if framed by a masterly hand, instructive to the scholar at first entrance, a much fuller and clearer comprehension of the subject will commonly be necessary than every one is able to attain, as well as much more labour than every one is willing to bestow.

For the giving expression to the same matter in the purely verbal mede, it is impossible to say how many forms, all more or less different from one another, some more apt, some less apt, whether in respect of choice of words or arrangement, might be capable of being employed. Expressed in the symbolical mode, all these variants are reduced to one. To the reader, great, whatsoever be the subject, is the advantage derived in the shape of clearness of conception, from this unity and simplicity in the mode of expression; to the writer it, moreover, affords, though a different, a correspondent advantage. Reducing all styles to one, it places the most inexpert grammarian upon a level with the most expert.

APPENDIX No. IX.

Hints towards the Composition of an Elementary Treatise on Universal Grammar, on a New Principle, on which that branch of Art and Science may, it is supposed, be capable of being taught and learned with advantage and facility, towards the close of a Chrestomathic Course.

Introduction.

The purposes for which Grammar, as applied to languages other than the vernacular one, is proposed to be included in the Chrestomathic Course, have already been brought to view.*

With a view to these same purposes it is supposed, that now in the present state of the field of Art and Science, to the leading principles of what is called Universal Grammar, admission might in this same seminary be given, and that with sufficient facility and adequate practical advantage.

Of a plan of the kind in question, the general principles of Mathematics will, it is taken for granted, be universally recognised as forming a proper part. But, it is confidently anticipated, that, with the rules of particular grammar to afford explanation to them, the general principles of universal grammar will not, on the part of the student, require either more labour or a greater maturity of intellect than the general principles of Mathematics; while, on the other hand, by the more extensive command which will thus be given to him over the powers of his mind, the use derived from a given quantity of labour will, in this case, be at least equal to any that can reasonably be expected to have place in that other case.

A consideration from which this expectation has received additional strength is, that upon the plan in question, to the exposition of the leading principles of the art and science of universal grammar upon the plan in question, the exposition of a correspondent part of the principles of Logic would be necessary. Considerations of the logical cast, forming all along the basis of such considerations of the grammatical cast as would be brought to view. If, by this connexion, the access to an acquaintance with so much of the connected matter as belongs to the head of Grammar, would be clogged with difficulty and the progress retarded, here would *pro tanto* be an objection. But the notion is, that from the two branches of art and science in question, mutual light would by each other be reflected, and that by means of the conjunction, a given degree of acquaintance with both would be attained with less labour than, supposing separation practicable, would be necessary to the attainment of an equal degree of acquaintance with no more than one.

The circumstance by which, at the present time in particular, the prospect of being able in relation to this at present abstruse branch of art and science, to administer instruction on terms of hitherto unprecedented advantage, is the discovery made by Horne Tooke:—that discovery by which the relation which has place between certain till then incomprehensible parts of speech on the one part and certain of the better understood parts of speech on the other part, has been brought to view;—by which the import of certain till then incomprehensible parts of speech was made known, by showing their identity with other parts of speech, the import of which was not thus abstruse.

The explanation of this discovery of his, having been left by him in an unfinished state, may, perhaps, in some measure, have been the cause, why no new system of universal Grammar, constructed with the lights thrown on the subject by that discovery, hath as yet been given to the world. But to the purpose here in question, to any one who will be at the pains of availing himself of them, the light afforded by that discovery will, it is believed, be found quite sufficient.

Should the expectations here spoken of be sanctioned by the event, two results, one theoretical, the other practical, both of them in a more particular degree gratifying to an English heart will, it is believed, be found deducible from the branch of instruction here proposed.

The theoretical one is, that to all the purposes of discourse taken together, Latin and

* Vide supra, pp. 33, 34.

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Greek not excepted, the English language is better adapted than any other language.

The practical result is, that in the seminary which, so much to the honour of this country, is at work for the training up of young persons to be sent abroad in the character of missionaries, in the hope of that glory which is to be reaped from the propagation of Christianity and civilisation among barbarous nations, by whom, when taken in the aggregate, a prodigiously diversified multitude of languages afford respectively the only medium they have through which instruction can be transmitted to them by the generosity of their intended benefactors,—an institutional treatise on the principles of universal Grammar would, if grounded on the foundation here in question, be found a useful assistant, substracting, at the same time, from the quantity of the correspondent part of such their literary labour, and at the same time in respect of strength of mind and mastery of the subject, making addition to their capacity for it.

Section I.

Of Language.

A communication made by language is either simple or complex.

It is *simple* when the matter of thought communicated by it is no more than what is contained in one proposition—one logical proposition.* *Complex*, if any more.

For the making of any communication,—in other words, for the framing a proposition, if every necessary part of it be expressed—no part of it *understood*, as the phrase is, *i. e.* left to be supplied by the person *addressed*—several parts, called words or terms, are necessary; or, at any rate, if no more than a single word be employed, and the import of an entire proposition be expressed by it, it is because, by means of a certain letter or letters, forming part of that word, an import is given to it the same as that, for the expression of which more words than one are in other cases employed,* viz. without making any addition to the sense of it.

Every complex communication is resolvable into two or more simple ones. Every complex proposition is resolvable into two or more simple ones.

Every simple proposition, if the expression given to it be complete, contains in it the import of at least three different sorts of words, the import of each of them bearing a particular relation to that of the rest.

To the import, for the expression of which three words are necessary and sufficient, if the import of any other word, having a separate import of its own, be added, the import of this additional word is expressible by, and when fully expressed, equivalent to, that of an entire proposition.

For the giving expression to the different propositions of which discourse is, or is capable of being composed, different sets of words, different sets of *sounds*, together with correspondently different sets of visible signs, employed for presenting to the sense of sight, or that of touch, the import of those sounds, with or without the sounds themselves, are employed by different portions of the human population of this earth, each set of sounds forming a separate language.

But for giving expression to all the different sorts of relations,† which, for the composition of *discourse*, i. e. of every possible assemblage of propositions, simple and complex, the sorts of words necessary and sufficient are the same in every language. These different sorts of words are what are called the *parts of speech*.

Into the import of a simple proposition of the most simple *sort* of proposition, three different sorts of words as already stated must enter. These are—

1. The name of the subject of the discourse, of the communication made by it.—
2. The name of some attribute, attributed or ascribed to the same subject.
3. The name of the copula,—the attributive copula by which the attribution is performed.

Of Language, the primary use is by means of expression to make communication of thought. By the necessity of making this communication it was, that the original demand for language was created.

Of the nature of language no clear, correct, and instructive account can be given but with reference to thought.

But the arrangement which, on this occasion, and for this purpose, is given to the materials, may have all along a view to, and be such as is prescribed by the arrangement that seems requisite to be given to the materials of language.

The origin of language being the demand created for it by the need men found themselves under of making communication of their thoughts, the next consideration is that of the modifications of which that demand is susceptible.

Here comes the inquiry, in what ways, by language in general, and by the different known languages in particular, or rather, by particular languages, and thence by language

* Example: in Latin, *sto*, and so *stes*, *stet*, &c. Of *sto*, the equivalent, in which every member of the communication has a word for the designation of it, is, *Ego sum stans*—I am standing, or in a standing posture.

† It belongs to the abstract or unapplied part of universal Grammar, to present to view the import of these several relations considered in themselves.

It belongs to the Grammar of each particular language to present to view the different forms of words, by which these relations are respectively expressed in that same language.

It belongs to the concrete, or applied part of universal Grammar, to present comparative views of the different modes in which expression is given to these same relations in different languages.

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in general, satisfaction has been given to that demand.

All along it will be matter not less of instruction than of curiosity and amusement, to go back, and, in the remaining fragments, as in exuviæ of lost species of plants and animals, to observe the features of language and languages in their earliest state.

Throughout the whole field of language, two languages, as it were, run all along in a state of parallelism to each other,—the one *material*, the other *immaterial*;—the material all along the basis of the immaterial.

The same stock of words serves for each,—each word serving, or being capable of serving, in both senses;—at any rate, every word originally employed in a material sense, is capable of being employed in an immaterial sense.

Saving the class of real entities distinguished by the appellation of inferential, the entities of which the words of the immaterial language are designative, are all fictitious entities.

Fictitious entities may be distributed according to the branch of Art and Science for the purpose of which the names of them require to be employed.

Thus we have, 1. Somatic, or Somatological fictitious entities: 2. Noological fictitious entities: 3. Ethical fictitious entities.*

All language is employed in announcing the existence, absolute or conditional, past, present, or future of some event or state of things, or say of some state of things quiescent or moving, real or imaginary, *i. e.* meant to be represented as real, or meant to be represented as imaginary.

In this case, the distinction between reality and imaginariness may apply as well to the things themselves as to the state, whether of motion or rest, in which they are represented as existing.

No state of things can have been in existence but in some place and some time,—in some portion of the field of space, and in some portion of the field of time.

Place and time are, accordingly, both of them adjuncts to all existence. Existence is a field or ocean which spreads itself at once over both these subjacent fields, the field of space and the field of time.

But though, in fact, neither space nor time can, in any instance, fail to be the actual accompaniments of existence, yet, by language, expression may, on any occasion, be given to existence without being given either to place or to time, or at any rate, without being given to both.

The ideas, in the designation of which language is employed, are reducible to two heads:—1. Ideas of subjects, *i. e.* of entities, real or fictitious, considered as subjects; and, 2. Ideas of relations—of relations between subject and subject.

For the designation of ideas of relations, adjuncts, and modifications attached to the principal idea—the idea of the subject—two modes are employed in language, viz.—1. Separate accessory words; 2. Modifications of the signs of the principal idea or subject—the principal word.

For the giving an account of these different modifications of ideas, the most commodious of all languages will be that in which the greatest use is made of separate words. Why? Because, in this case, for the separate designation of each such modification, there is a separate and apposite word already provided by the language.†

The more of these separate words a language possesses, the less the demand it has for, and naturally the less the number it will have of the above-mentioned verbal modifications.

These modifications have, by Grammarians, been termed *inflections*.

In proportion as the number which it furnishes of these modifications or inflections is small, the language may be said to be a *sparingly inflected*—in the opposite case, a *copiously inflected*, language.

Section II.

Systematical Sketch of the Parts of Speech.

Under the universally applying appellation of Parts of Speech, are included the whole number of the words of which the language in question is composed, classed and denominated according to the several relations which they bear, or are capable of bearing, one to another, in the composition of a grammatical sentence.

A sentence, in the language of grammar, is not the same thing with a proposition in the language of Logic. A sentence, when all the words belonging to it are inserted, cannot contain less than an entire proposition, but it may contain any number of propositions.

The different species of relations which, for the purposes of discourse, have need of so many different classes of words for giving expression to them, are the same in all languages. The parts of speech are, therefore, the same in all languages, the scantiest and most inconveniently constructed as well as the richest and most cultivated,—the Hottentot and Chinese as well as the Greek and English.

Universal grammar is that sort of grammar which treats of those relations in so far as they are common to all languages.

When, upon a correct foundation, an all-comprehensive institute of universal grammar has once been formed, supposing it framed with that degree of skill which has been exemplified in so many particular grammars, it will serve as a common standard of comparison, and as a source of explanation for all

* See this subject at length in the immediately following tract.

† Of all languages, the language in which, for this purpose, the greatest use is made of separate words is, it is believed, the English.

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languages, and as a foundation-model for the several particular grammars, which take for their respective subjects these same languages.

Without, and therefore, before, the discoveries made by Horne Tooke, no such universal grammar, it will be seen, could have been formed. By him the way has been prepared for a work of this sort; but, for the framing of it, one of the requisites has been a clear view of that logic in which, when taken in its most extended sense, grammar, even universal grammar, has its foundation; and so it has happened that no professed Grammarian seems, as yet, to have given himself this qualification.

An acquaintance with universal grammar, as above-described, will naturally be among the acquisitions to be made in a Chrestomathic school. So far from adding to, it will substract from, the quantity of labour necessary to the acquisition of a given degree of acquaintance with the particular languages therein proposed to be taught.

Words are the signs of thoughts,—proportioned only to the degree of correctness and completeness with which thoughts themselves have been conceived and arranged, can be the degree of correctness and completeness given to their respective signs.

Of speech, though the correction, extension, and improvement of thought be, and that to a prodigious degree a consequence, yet the more immediate and only universally regarded object, is but the communication of thought.

But by anything less than an entire proposition, *i. e.* the import of an entire proposition, no communication can have place. In language, therefore, the *integer* to be looked for is an entire proposition,—that which Logicians mean by the term logical proposition. Of this integer, no one part of speech, not even that which is most significant, is anything more than a fragment; and, in this respect, in the many-worded appellative, part of speech, the word *part* is instructive. By it, an intimation to look out for the integer, of which it is a part, may be considered as conveyed. A word is to a *proposition* what a *letter* is to a word.

A sentence,—in that which, by Grammarians, is meant by the word sentence,—the matter either of no more than a single proposition, or that of any number of propositions, may be contained.

Not unfrequently, by no more than a single word, the import of an entire proposition is expressed. But the case in which this happens is that in which, as to all that is not supplied by modification, as above, that omission of words, of which, at the same time, it is necessary that the import should be present to the mind, that omission which, by Grammarians, is called *ellipsis*, has place.

Of the existence of an ellipsis, or any omission, the test is this:—Look out for the words, the import of which, though the terms themselves are not inserted, is supposed to be intended to be conveyed. In so far as this is the case, then, so it is that, by the insertion of these words, no addition will appear to have been made to the sense.

Without a gap in the sense, an ellipsis can no otherwise be left than in so far as, by the nature of the subject, or of the context, *i. e.* the words of which the circumjacent proposition are composed, the import of the words omitted is suggested.

Arranged in the order of simplicity and conceptibility, and denominated by their usual names, the several parts of speech that are essentially different from one another, and not included any one of them under any other, will stand as follows:

1. Substantive. Noun-substantive.
2. Adjective. Noun-adjective.
3. Verb. Verb-substantive, called also the copula.
4. Preposition.
5. Conjunction.

If considered as distinct from all the above, and not including in itself the import of several of them, the interjection does not form a part of organized language. It is no more than part and parcel of that unorganized language which is common to man and the inferior animals.

In the above list, the word substantive must be considered as unfurnished with those several additaments and other modifications by which the relations designated by the words gender, number, and case, are expressed.

So likewise the noun-adjective.

So likewise the verb, as distinct from those by which the relations designated by the words person, number, moods, and tense, are expressed.

The pronoun-substantive will be found to coincide in its import and properties with the noun-substantive, and that as perfectly as any one noun-substantive with another common substantive, that is, the sort of relation it bears to the several other parts of speech is the same.

The pronoun-adjective will, in like manner, be found to coincide in its import and properties with the noun-adjective.

The article, whether definite or indefinite, will be found in like manner to be but a species of noun-adjective.

A part of speech is either, 1. Aplonoctic,—Simple in its import. Or, 2. Syncraticonoctic,—composite in its import.

A part of speech, simple in its import, is either, 1. Significant by itself. Or, 2. Not significant by itself.

The only part of speech which is perfectly simple in its import, and at the same time integrally significant, is the noun-substantive. The noun-substantive, not as it exists in Greek and Latin, complicated with literal modifications indicative of logical relations, such as gender, number, and case, but such as it exists in English, as in the words *man*, *woman*, *horse*.

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A noun-substantive is a *name*, as in the Latin the word noun truly imports.

The entity of which it is the name, belongs either to the class of *real* entities, or to the class of fictitious entities.

Incorporeal as well as corporeal substances being included, real entities are those alone which belong to that universal class designated by the logicians by the name of substances.

Substances are divided by them into corporeal and incorporeal. Under the name of corporeal, are included all masses of matter, howsoever circumstanced in respect of form, bulk, and place.

Of corporeal substances, the existence is made known to us by sense. Of incorporeal, no otherwise than by ratiocination,—they may on that account be termed inferential.*

To the class of inferential entities belong, 1. The soul of man in a state of separation from the body. 2. God. 3. All other and inferior spiritual entities.

Substantives are either proper names or common names. A proper name is a sign by which some individual object is alone signified. A common name is a name by which some class of objects is signified.

In the order of time, the use of proper names cannot but have preceded the use of common names.

Common names cannot have been formed without a course of experience, whereby the identity or resemblance of properties or qualities, as between individual and individual, among all such individuals as belong to the class so constituted and designated, has been made known.

The import of a proper name is intelligible to the inferior animals, to all animals, for example, who for the purpose of their being fed are accustomed to be called. If it be never addressed on any other occasion, or for any other purpose, the sound by which it is called becomes, in the animal's mind, the animal's name. To the animal it is but a proper name, howsoever, to the man who on that occasion uses it, it may be a common name. To the man who, intending to give food to a cat, cries puss, puss may be a common name, and be accordingly applied to the purpose of feeding several cats at once. But to each respective cat it is but a proper name,—what each cat understands is that itself is named by it. What no cat understands is that any other cat is named by it.

Among names of fictitious entities, the foremost, and those the designation of which is of most immediate necessity to mind-expressing converse, are qualities.†

Taking the word *proposition* in its simplest acceptation, by every proposition the existence of some quality in some subject is asserted. A proposition is any portion of discourse by which the existence of some quality in some subject is asserted. The name of the substance is the noun-substantive. The name of the quality is the noun-adjective. The word by which the relation between the quality and the substance is indicated, viz. the existence of the one in the other, is by logicians called the copula.

By grammarians, on some of the occasions on which by logicians the term copula is employed, the term *verb* is employed. But it would not by any means be true to say that the word *copula*, and the word verb are synonymous,—interconvertible—indicative of precisely the same object, and nothing more. By the word *copula* no more than one single class of words is indicated, viz. the class of words by which intimation is conveyed that in the opinion of the speaker the quality named by him exists in the subject, the name of which is pronounced by him at the same time. By the word verb is indicated the cluster of objects the names of which are by grammarians put together, and spoken of as constituting all of them together but one *verb*.

The import of the word copula is the same in all languages. The import of the word verb is different in different languages. In the copiously inflected languages, it includes a much greater number of words than in the sparingly inflected languages.

In the import of the copula is included nothing more than the one idea just brought to view.

In the language of grammarians one verb is by the name of the verb-substantive distinguished from all others,—it may be termed the verb in which are contained indications of simple existence. In Latin, the verb *sum;* in English, the verb *to be;* for in Latin one of the many species of conjugates included under that complex denomination, in English another of those species of conjugates, is employed as the name of the whole aggregate.

In every other verb throughout all its modifications, to the import of the copula is added the import of some name of a quality. In the verb-substantive no such additament has place unless the objects designated by the words person, number, mood, tense, be regarded as

* According to those who agree with Bishop Berkeley, matter belongs to the class of those entities of which the existence is inferential; impressions and ideas being, in that case, the only perceptible entities. But, in the case of matter, the justness of the inference is determinable, at all times determinable by experimental proof: if of the wall opposite me, I infer the non-existence, and run that way as if there were no wall, the erroneousness of the inference will be but too plainly perceptible on my forehead; which is not the case in any one of these other instances.

† *Quality* being taken in the largest sense of which the word is susceptible, is that which, in its import, is co-extensive with the applicability of the word so much used in the Aristotelian Logic school, *predication*.

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capable of being included under, and designated by, the word *quality*.*

The following are the accessory ideas of which the principal ones expressed by the several parts of speech in question must be divested. Why? *Answer.*—Because of these several accessory ideas, the several signs will be found to be equivalent to the import of so many entire propositions.

I. Noun-substantive; accessory ideas attached to it in some languages.

The ideas designated by the words, 1. Gender. 2. Number. 3. Case.†

II. Noun-adjective; the same.

III. Verb. Accessory ideas attached to it, as above, in some languages.‡

1. Person, (relation had to the speaker, and the being spoken to.)

2. Number.

3. Mood or mode, which is either, 1. Absolute; or, 2. Conditional.

4. Tense, *i. e.*, the sign of time.

I. Gender. Proposition involved in the import of the termination by which gender, *i. e.* sex, is designated.

1. The *person* in question; viz. the person in the designation of whom the noun-substantive, to which the termination is attached, is employed, is of the sex thus designated,—either male or female; applied to human, and most other animated beings, the proposition thus expressed may always be true.

2. The *thing* in question is of the sex so designated. Applied to unorganized beings, this is never true; and so among organized beings, with few exceptions, if applied to vegetables. By this absurd falsehood, useless complication to a vast amount, and conception not only erroneous but pernicious to a considerable amount, are infused into the composition of the languages in which this excrescence is contained, and in particular the Latin, the Greek, and the modern languages, of which these ancient languages form respectively the main roots.

II. Number. Proposition involved in the import of the termination by which number is designated.

Objects of the same kind, more than one are meant to be indicated by the noun-substantive, to which with or without the addition of the noun-adjective, the termination in question is attached.

In the same way may be brought to view the propositions respectively indicated by the terminations or other modifications expressive of case, mood or mode, and tense.

Two cases there are, in and by the import of which no such adscititious and accessory idea is necessarily involved. There are, 1. The nominative. 2. The accusative. In these cases there is not any proposition of the import of which the designation is added to that of the import of the noun, to which the termination, or other modification, is attached.

Those in the instances of which there is always some proposition, of the import of which the designation is always involved in that of the termination in question, are, 1. The genitive. 2. The dative. 3. The ablative.

In certain sparingly inflected languages, the import of the genitive is indeed expressed by a termination. But in those same languages it is in every instance expressed also by a proposition.

In every language in which it has place, the substitution made of terminations or other inseparable modifications to separate words, such, for example, as prepositions, is, on several accounts, a great blemish. 1. It is a source of prodigious complication,—the whole of it useless. 2. It is a most copious source of ambiguity; one such modification being in these copiously inflected languages applied of necessity to convey indiscriminately a multitude of different imports, which being essentially different, present a correspondently urgent demand for these instruments of distinction, of which so correct and complete a stock is afforded by the sparingly inflected languages.

3. From the multitude of these separate adjuncts which in the sparingly inflected languages are capable of being conjoined with the same principal part of speech, and the multitude of the changes capable of being rung upon them, by arranging them in different orders, may be seen a copious source of energy, variety, and thence of beauty, of which the copiously inflected languages are not susceptible.

Section III.

Properties Desirable in Language.

The properties desirable in the case of any particular language will be correspondent to, and dependent on, the properties desirable in all language or discourse taken in the aggregate.

Different properties are in different degrees desirable in a human discourse on different

* A sign designative of present time, is it to be considered as designative of a relation? Is not the present the standard of all relations of time? The copula, it should seem, must be considered as including the designation of present time, unless in so far as intimation is given of the contrary.

† In the copiously inflected languages, (*ex. gr.* Greek, Latin, Sclavonian, and their derivatives,) all these three accessory ideas are all of them distinguished by terminations: letters, or combinations of letters, added or substituted to those expressive of the principal object. In the sparingly inflected, for example: Gender, not; number, yes; case, the Genitive, and no other.

‡ In the Russian, a dialect of the Sclavonian, instances are not wanting in which, not only the noun, but the verb also, is encumbered with variations of termination indicative of sex.

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occasions; the properties desirable in a mass of discourse will, in some degree, as to some of them, depend on the nature of the discourse, that is, on the sort of end which it has in view, and the occasion on which,—the state of things, —the conjuncture in which it is uttered.

The properties desirable in language in general will then be the sum of all the properties which can be desirable in it, on the sum of all the different occasions that are capable of having place.

One all-comprehensive property may, therefore, be stated as desirable in any particular language, viz. the capacity of being, according to the nature of each occasion, endowed with all the several properties which on that particular occasion are desirable in language,—would be desired by, would be serviceable to, any and every person who on that occasion should have need to employ the faculty of discourse.

Properties of the first order, or primary properties,—properties of the second order, or secondary properties; under these different heads may be ranked all the several properties desirable in language or discourse taken at large.

By properties of the first order, understand all such properties as in a direct way are respectively conducive to one or other of all the several sorts of ends, to the accomplishment of which language is in any part of it, on any occasion capable of being employed and directed; and which, supposing them possessed, need not for that purpose the intervention or addition of any other properties.

By properties of the second order, understand such properties as are indeed conducive to the same ends, but no farther, nor any otherwise than as being respectively contributory to the endowing of the language with one or more of the properties above designated and distinguished by the appellation of properties of the first order.

The several properties of the first order which, with reference to all ends, and on all occasions taken together, are desirable in language, may be thus enumerated :—

1. Clearness. 2. Correctness. 3. Copiousness. 4. Completeness. 5. Non-redundance. 6. Conciseness. 7. Pronounciability. 8. Melodiousness. 9. Discibility. 10. Docibility. 11. Meliorability. 12. Impressiveness. 13. Dignity. 14. Patheticalness.

The several properties of the second order, which in respect of their conduciveness to the same ends, but through the medium each of them of one or more of the particulars standing in the above list of primary properties, are desirable in language, may be thus enumerated.

1. The relations expressed by it, expressed as much as may be by distinct words in contradistinction to modifications of other words.

In proportion as it is endowed with this property, a language may be termed, a sparingly inflected language.

A word being assumed as the basis or root of these several modifications, they will consist either of additions to, substractions from, or changes of some one or more of the letters of the fundamental or radical word.

These may be made, 1. At the beginning. 2. At the end. 3. At any intermediate part.

All such modifications may be termed *inflections*; in proportion to the multitude of these modifications, it may be called a copiously inflected language.§

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* Here the MS. terminates with this notandum : —" Another secondary property,—Affording facility to the construction of composite words. State the use of composite words."

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NOTE BY THE EDITOR.

If the term Ontology be considered, as it generally is, synonymous with that of Metaphysics, and be held to embrace all that is brought together by the English writers on that science, the following tract will be found to illustrate but a very small branch of the subject. The original MSS. have indeed all the appearance of being purely fragmentary; and it is probable that the Author intended to incorporate them in the great system of Mental Philosophy, of a design to prepare which he has left so many traces, and of which the works on Logic, Language, and Grammar, which follow this, may be considered as portions. Although thus limited in extent, it was thought best to publish these pages in the form of a separate work, as the analysis and classification of the matter of thought and language which they contain, form what may be called the elements of the Author's Psychical System, and are understood, or more briefly repeated, in all his examinations of the operations of the mind. The philosophical reader will perhaps find in them a key to many of the difficulties that created the controversy between the Realists and the Nominalists; and they undoubtedly throw considerable light on that dispute. The reader who wishes to follow out this subject will find farther elucidations of it in the tract on Logic, at pp. 246, 262, and in that on Language, at p. 327.

The MSS. from which this tract is edited bear date 1813, 1814, and 1821.

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ESSAY

ON

LOGIC:

NOW FIRST PUBLISHED, FROM THE MANUSCRIPTS

OF

JEREMY BENTHAM.

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NOTE BY THE EDITOR.

Logic, according to the acceptation in which the Author seems to view the term, evidently embraces a far wider range of subjects than can come under the general notion entertained of it,—as a formal science, having cognizance of the laws of thought to the exclusion of its matter. Of the extent of field which the author intended to embrace, in a treatise on the subject—supposing him to have completed such a work according to his original conception of it—some idea may be formed from a perusal of Chapter I. The traces of an intention to fill up this great project in all its particulars, may be found in several of the works published as separate essays—those on Language and Grammar, for instance—where the word "Logic" is written on the margin of the original MS., in company with the more immediate subject of discussion; as if it had been in the Author's view, after having severally completed these departments, to unite the whole into a complete system of Psychology. The work which immediately follows is thus far from being complete. It, in short, consists merely of those parts of the scattered materials which were most homogeneous, and had the most direct bearing on Logic, as the Author has defined it (the art which has for its object the giving direction to the mind in pursuit of its purposes) independently, on the one hand, of that examination of the powers of the human mind on which it might be founded; and, on the other, of its application to the various purposes to which it may be used. In some places, a system of arrangement had been adopted by the Author; as to others, there was internal evidence of the order he intended. On some occasions, however, there were no means of discovering the order intended to be followed, and an arrangement purely empirical was of necessity adopted. From the dates marked on the MSS., the Author seems to have devoted himself to his psychological works at four distinct periods: in 1811, from 1814 to 1816, in 1826, and so lately as 1831. It was not his practice in resuming a subject, to revise what he had already written, for the purpose of connecting with it the additions he might make. To this circumstance must be attributed many of the abrupt transitions, and the occasional repetitions which the reader may encounter. With regard to the writers whose works were the received authorities on the subject of Logic at the time when he wrote, it was evidently far from the Author's wish to give an exposition or a criticism on their method of treating the subject, or even to profess any general acquaintance with logical literature. His object was simply to give the world the results of his own ratiocination on the subject of Logic, according to the meaning he attached to the word. There are a few criticisms on the Aristotelian system, which the reader must keep in view are made on the version of Sanderson only, and do not profess to embody any direct exposition of Aristotle's system.

Part of the riches of these MSS. have already been given to the world in the "Outline of a New System of Logic, with a Critical Examination of Dr Whateley's Elements of Logic," by George Bentham, Esq., the nephew of the Philosopher. It was Bentham's wish that his Psychological works should be edited by his nephew; and from the attention he has paid to the subject, it is to be regretted that circumstances interfered to prevent that gentleman from complying with the request.

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LOGIC

INTRODUCTION.

Of this work, the parent hints were drawn from the logic of Aristotle, viz. Bishop Sanderson's Compend of it, in the years 1760 or 1761 to 1762 or 1764, when the author was a youth, or rather a child, at Queen's College in the University of Oxford. Of the notions therein exhibited, some he found continually applicable, and applicable with advantage, to ordinary practice. These treasured themselves up in his mind.

Aristotle,—the works of his predecessors in the same line, (though the existence of them has, by frequent incidental allusion of his, been made known to us,) being lost, is with reference to us the father of the art called Logic, the sole fountain of everything that has ever been presented, or ever can be presented to our minds under that imposing name.

In such accounts as will here be given of this art, considered in the state in which it has been found by the present work, it may naturally enough be expected that the text of Aristotle should, from first to last, be the object of reference.

But with a view to use in relation to this, as in relation to every other art, the material and only material question is, what is that which is written, not who is he that wrote it. Two thousand years and more have already elapsed since the works of Aristotle, and in particular those which have taken for their subject the field of Logic, were made public. In all that length of time, unless the last century, or century and a half, be regarded as constituting an exception, the making the most and the best of this art, and of the labours of the ingenious founder of it, has afforded occupation to some of the acutest minds that England or Europe has produced. By many of them, if not much has been added to the quantity of matter elaborated by Aristotle, not a little has been done towards the rendering it plainer, and more easily comprehensible by the pupil.

In the instance of this, as of any other branch of art for use, it is to the most instructive work which the field happens to afford, and not the most ancient, that a man whose wish is to make himself more or less acquainted with it, will, if his mind be not absolutely enslaved by prejudice, always betake himself: it is to the works of Davy, or Dalton, or Thomson that a man will betake himself for instruction in chemistry, not to those of Van Helmont or Paracelsus.

In the British isles not a few are the works which at different times have been published, with the professed design of serving for compendiums of instruction in this art. In the University of Oxford, Queen's College used to be, and for aught the author of these pages has heard to the contrary, continues to be, regarded as the College in which it has been cultivated with greatest success: in this College the Compendium, written in Latin, by Sanderson, who, in the days of Charles the First and Second, was Bishop of Lincoln, used to be, and it is supposed continues to be, the classical work—the work which was taken for the text by the tutor on the occasion of his lectures to his pupils. Considered as a methodical abridgment of what Aristotle and his earliest commentators, the Greek logicians, have left us on this subject, it is, at any rate, the most copious: it is supposed to be the most correct, complete, and, upon the whole, the most instructive. In relation to this or that point, suppose the account given by Sanderson be not a perfectly exact copy of that delivered by Aristotle, what matters it? If it be not exactly the same, the presumption is that it is better. At the end of so many centuries, employed in the endeavour to render the account given of this art better than the account given by Aristotle, the expectation, is it in regard to any point a natural one, that instead of being better, it will be found worse?

Sanderson's Compendium is, accordingly, the work to which, as often as the question may happen to present itself, what on this point has been said by Aristotle, and by the school of Aristotle, reference will be made. Sanderson's Compendium is accordingly the work from which, should any supposed imperfections be found in that system, the exemplification and proof of such imperfection will be deduced.

Meantime, what is far from impossible is, that, in this or that instance, an imperfection which, in this way, through the medium of this his English disciple, comes to be imputed to the master, would, if justly chargeable, be found chargeable not on the master, but only on this disciple. But should this sort of injustice, such as it is, chance now and then to be committed,—not that this is any more than a mere supposition for the purpose of the argument,—what would it matter? Where would be the practical mischief? For one who, for instruction, resorts all along, or even to any considerable extent, to the original, some dozen, or some

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score, will never look further than to this or some other—most probably to this, the most instructive—compendium. Taking the original for its subject, the strictest comment would be a comment, not on the *art*, but on the language.

If on the occasion of any such imperfections, reference were made, not to the Greek original, but to this or that Greek or Latin commentator, or abridger, volumes and volumes might thus be written, and none of them of any use.

In the sense above brought to view, the logic of Aristotle may be said to have formed the basis of this work. In that storehouse of instruction the author found, at any rate, a considerable number of the tools or instruments which he has had to work with.

But though such was the assistance derived from the great philosopher of old, the author—never at any time, never in any instance, did it occur to him to consider the opinion or discourse of that philosopher, any more than of any one else as the standard or criterion of truth. The human mind, viz. his own mind—that being the only mind open to any man's immediate observation—was the source from which Aristotle drew the instruction for which we are indebted to his ingenious labours: his own mind was, in like manner the source whence the author of the present work drew those notions which it is the object and the endeavour of this work to communicate to, and tranfuse into such other minds as may find themselves disposed to receive it.

Truth is never capable of being so clearly or strongly impressed, when considered by itself, as it is capable of being when illustrated by a view of any opposite error or errors by which its place has been wont to be occupied.

This system of Aristotle is the system by and according to which whatsoever has been taught under the name of logic, has now, for upwards of two thousand years, been taught; and through by far the greater part of that time it has been considered as being in a state of absolute perfection, little if at all capable of receiving improvement, and not in any degree susceptible of amendment—of amendment in any of its three modes, viz. omission, addition, and substitution.

By whomsoever the present sketch is looked into and considered, if Aristotle's system of logic, in so far as it is delivered in the first chapter of Bishop Sanderson's Compendium of that art and science, be looked into at the same time, and compared with it, very different to a considerable extent will the two volumes be seen to be at the very first glance.

The account which in this work is given of logic, in regard to its nature and business, is before the reader; if the extent given to it in that account be not in a considerable part improper and irrelevant, the extent given to it by the Aristotelians will be seen to be incomplete.

Of the topics that presented themselves as appertaining to the art, appertaining to it in such sort that, supposing any one omitted, the account would, *pro tanto*, have been incomplete: the list is before the reader; if this list be a correct one, that given by the Aristotelians will be seen to be an incongruous one; on the one hand deficient, on the other hand redundant.

In the art and science of logic, two branches may be distinguished, the tactical and the dialectic. The tactical, that which teaches the arrangement which, for whatsoever purpose, requires to be given to ideas. The dialectic that which, for a particular purpose, gives arrangement to them in their quality of materials of discourse, to wit of the disputatious kind.

In the works of Aristotle, the fountain whence all ideas respecting Logic have been hitherto derived, the tactic was scarcely considered in any other light than that of an instrument employed in carrying on the disputatious branch;—the war of words being a sort of interlude by which men of superior minds amused themselves in the intermission of the war of arms.

Of late years, and by no means without reason, the dialectic has been, as to the greater part of it, an object of neglect; the tactic, being the main instrument in the hands of art, of invention to whatsoever subject-matter applied, can never deservedly be so, so long as man is man. On the present occasion, the precedence, as between the two, may be determined by these observations. In the first place will come the tactical branch; in the next will come the application made of it on occasion of the exercise given to the dialectic.*

In speaking of logic as an *art*, according to the definition of the Aristotelians, I find myself obliged to add to the word *art* the word *science*. For the truth is that, howsoever clearly distinguishable in idea, the two objects, art and science, in themselves are not, in any instance, found separate. In no place is anything to *be done*, but in the same place, there is something to *be known*; in no place is anything to *be known*, but in the same place there is something to be *done*.

To the presenting, in conjunction with each other, as well as either of them without the other, the idea which the word *art* is employed to signify, and the idea which the word *science* is employed to signify, the Latin word *disciplina* is correctly and admirably well adapted. Unfortunately, though so perfectly coincident in respect of its original, and so near to perfect coincidence in sound and appearance, yet in respect of its established, and, at present, customary *import*, the correspondent English word *discipline* presents no equal aptitude.†

* With the exception of some notices of an introductory and critical nature, no MSS. bearing on the dialectic branch have been found.—*Ed.*

† From signifying *instruction* itself or the sub-

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Great, however, would be the convenience, strong the light, thrown upon the whole field of human power, if, instead of the composite and frequently perplexing locution *art and science*, or *science and art*, the men of modern times could prevail upon themselves to employ the simple as well as classical term *discipline*, discipline would then be the name of the genus, art and science the name of the species included in it.

CHAPTER I.

Logic—What?

Section I.

Definition here given of Logic.—Its amplitude justified.

Logic, in the sense in which the word will, throughout the whole tenor of this work, be employed, may be defined, the art which has for its object, or end in view, the giving, to the best advantage, direction to the human mind, and thence to the human frame, in its pursuit of any object or purpose, to the attainment of which it is capable of being applied.*

That of all definitions that have been, or can be given of this art, this is the most *extensive*, seems upon the face of it to be sufficiently manifest.

That it is the most *useful*, will, it is believed, be no less so; for it is in this modern definition alone, and not in any preceding one, that its relation to practical *use* in any shape has been directly held up to view.

That it is the most proper, will, at the same time, appear from the account given of logic by those who were the first to hold it up to view in the character of an art, and that an attainable one: in a word, by its inventors, viz. Aristotle and his followers, not to speak of his at present almost unknown predecessors.

For to the extent to be given to an art, a more unexceptionable standard of propriety can scarcely be found than that, if any, which has been ascribed to it by its inventors. In the present instance, true it is that, in the definition given of it in form, the extent assigned to it falls considerably short of the extent here assigned to it as above; but, as will also be seen, in the course of an observation by which that definition is immediately followed, the deficiency is made up, an extent is assigned to it much more ample than that which is given to it by their definition: an extent little, if anything, short of that extent ascribed to it as above in the present work.

According to this account of it (it may here naturally enough be objected,) an institute of the art of Logic, and a complete Encyclopædia—at any rate if the Encyclopædia be a methodical one—are one and the same thing. This work, if it be what it professes to be, is therefore an Encyclopædia, and that a complete as well as a methodical one.

Answer.—To entitle itself to the appellation of a complete one, true it is that any institute of logic, and therefore this, cannot have left altogether unvisited any portion whatever of the field of art and science, no nor of the whole field of human thought and action. But of every part of that field an Encyclopædia may, with perfect propriety, give a complete survey; whereas that which, in relation to that same field, comes within the purview of the present work, consists of no more than a general outline, including, together with its principal divisions, here and there a hint, such as may happen to be suggested by a comparative and bird's-eye view, and thence, in some sort, a commanding view for the more advantageous culture of it.

In relation to some of the principal points, in company with the view here given of the art, will be presented those which have been left to us by the Aristotelians. In this way, mutual light, it is hoped, will be thrown upon each other by the two sketches; and the extent as well as direction of the progress made, should any be found to have been made, by the modern one, will be the more clearly discernible.

As to its field or *subject*, the subject on which its operations are performed, it is neither more nor less than the entire field of human thought and action. In it is accordingly included the whole field of art and science; in it is moreover included the field of ordinary, *i. e.* unscientific *thought*, and ordinary, *i. e.* unartificial action, or say *practice*, including, together with the whole contents of these respective fields—viz. all the subjects, not only of human action but of human thought—all entities, not only real but fictitious, not only all real entities but all fictitious ones that have ever been feigned, or remain capable of being feigned: fictitious entities, those necessary products of the imagination, without which, unreal as they are, *discourse* could not, scarcely even could *thought*, be carried on, and which, by being embodied, as it were, in names, and thus put upon a footing with real ones, have been so apt to be mistaken for real ones.

On the one hand, artificial action or practice, and scientific thought; on the other hand ordinary unartificial practice and ordinary or unscientific thought: under these two divisions, taken together, the whole field of human thought, as well as the whole field of

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ject of it, in English as well as in French, and probably because so it was seen to be in French, it has come to signify along with, and frequently instead of it, the *means* employed in the administration of instruction, viz. in so far as they consist of coercion and punishment, in the first instance, on the occasion of education at large; and thence in the military department of government.

* See a criticism on the author's method of defining logic, in Mr George Bentham's Outline, p. 12–13.

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human action, cannot, it is evident, fail of being included.

What distinguishes this art and science from every other branch of art and science, is that in its field of action are contained the several fields of action of all those other branches of art and science; in the field of action of this *discipline*, are included the several fields of action of all those other disciplines. By its generality, its amplitude, and nothing else, does it stand distinguished from the aggregate of those same disciplines.

Of the observations which respectively apply to the subject of those several disciplines, those which are most general may be referred to the head of logic. In no quarter, therefore, are those boundaries fixed, by which the field of logic is separated from the respective fields of those several other and subject disciplines. Thus, in government the territorial field of the dominion of the sovereign is composed of the territorial fields of the dominion of the several individual and particular land-owners.

Section II.

Narrower and more common Acceptations of the Word Logic.

Of the field of exercise belonging to this master-art, the all-comprehensiveness, on the supposition that the definition above given of it is a proper one, will upon examination, it is believed, be sufficiently manifest. In it will be found comprehended, not only all science, and every art that can go by the name of art or science, but every other subject of contemplation or occupation to which it is possible for the human faculties, under the guidance of human reason, to be applied; every occupation, including the most common and unartificial, as well as the most extraordinary, of those occupations by which the measure of human life is filled up.

In no such comprehensive, nor indeed in any steady point of view, does it appear to have ever hitherto been considered.

By the Aristotelians, it has been described in the same breath as comprehending the field of science alone, and as comprehending that same field with the addition of the field of art.

In the narrowest of all the acceptations in which it has been employed, it is neither more nor less than the art of disputing in mood and figure. In a somewhat more enlarged sense it has been employed to denote the art of disputation, in whatsoever manner carried on. When to the whole art this amplitude is assigned, that which has just been mentioned has been considered as a modification of it, and has been styled the *logic of the schools*, or *school logic;* meaning by schools, those which in the middle ages were kept for the teaching of this art according to the principles laid down by Aristotle.

In general by those who employ it, a signification considerably more extensive, but still undeterminate, is frequently attributed to it. Arrangement, for example,—arrangement and definition, appear commonly enough to be considered as belonging to it. In so far as these operations,—operations thus extensively useful have been considered as belonging to it, it could not but have been considered as ministering, or at least capable of being made to minister, to the occasions of science in general, and even of art, not to speak of those of common life.

But forasmuch as by the followers of Aristotle, if not by Aristotle himself, the art of disputing in mood and figure seems to have been considered as the ultimate object of pursuit and study,—*arrangement*, *definition*, and in general all other portions of the art, and applications made, or capable of being made, of it, being considered and represented as no more than accessory and ministerial to that principal and, in those days, practical use, hence it is, that if the amplitude ascribed to it by the above definition be not excessive and unwarrantable, the most extensive conception which as yet it has been usual to form of it, may be stated to be inadequate.

Section III.

Relation as between Logic and Metaphysics.

Whatever were said of logic, would be not simply, but perniciously imperfect, if in conjunction with it, something were not said of metaphysics.

Between the imports that have been respectively given to these two words, no one to whose cognisance they have ever presented themselves can be unapprized that there exists a very near relation; by no one, it is believed, has any endeavour been employed for exhibiting any correct idea of what that relation is.

Of the word *metaphysics*, the origin is still to be seen in Aristotle. In his works what it was employed to denote was, not the nature of this branch of art or science to which it gave a name, but merely the relation in respect of priority and posteriority, which in the collection of his works, the work in which he treated of this branch of art or science happened to bear to the works in which he treated of physics. Another meaning, and though recondite, rather a more characteristic one, may have been;—the branch of art or science, upon which the mind will not in any natural course have entered, until it have touched upon that which is called physics; nor indeed without having passed over, or at least passed through that branch.

When looked at, that treatise turns out to have for its subject neither more nor less than a few terms of the most general, *i.e.* most extensive, and at the same time the most frequently exemplified import of any which language affords. Existence, contingency, possibility, necessity, may serve as examples.

Upon this view of the matter, it turns out

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that in its original import this branch of art or science was neither more nor less than a *sprig*, and that but a small one, of the branch termed *logic;* forming but a minute portion of it, not only according to the extent ascribed to it, as above, in the present work, but according to the so much narrower extent ascribed to it, as above, by the Aristotelians.

Within this last century or two the word has received an import of which it may in general terms be said, that it is much more *extensive*, but which is in the highest degree vague and indeterminate.

It seems difficult to know what account to give of it, otherwise than from the various reproaches which from divers and various classes of writers have been cast upon it. Religionists, lawyers, politicians, fashionable sentimentalists, and poets, have, under the name of metaphysics, found something which has appeared to them to thwart their views, opinions, interests or prejudices, and against which they have accordingly used their endeavours to cover it with reproach and bring it into disrepute.

Of the art or science of logic, one, and that one the most immediate use, is the establishment of clear and determinate ideas; in relation to whatsoever discourse we employ on any subject of importance, the taking care that to such discourse the ideas we attach shall be clear and determinate ones, and in so far as in the language employed in the course of their converse with us, by others, any deficiency in this essential quality becomes observable, to employ our endeavours by apt *questions*, to clear it from whatever clouds of obscurity or ambiguity it may happen to be involved.

The words employed, and the compounds formed of them in the shape of propositions,—in one or other of these classes of objects may be seen the source of every instance of error or perplexity,—every cause of deception to which discourse can give rise; if it be in the structure of the propositions, or in the sort of connexion given to them that the imperfection has, or is supposed to have, its source, logic, (in which grammar may be considered as included) is the name of the art or science, by which alone the remedy, if obtainable, can be obtained; if it be in the import attached to the words taken singly, sometimes it is to logic, sometimes it is to metaphysics, that any endeavours to remedy it are referred.

Voluntary or involuntary—whosoever harbours a favourite error which it would pain him to see exposed, beholds in logic or metaphysics, or both, an object of antipathy and terror. From the adverse current of these affections, *logic*, being under that its name defended not only by the authority of the most admired of the philosophers of antiquity, but of those reverend persons from whose lips instruction in its highest and most polished forms is imbibed,—*metaphysics* is commonly the *butt* against which the chief force of these hostile affections is directed.

CHAPTER II.

LOGIC, ITS CHARACTERISTICS.

SECTION I.

General View of the Characteristics.

1. Aristotle's list.—In the character of an appendage to the definition of the word logic, the Aristotelians have brought to view a cluster of abstract terms which had presented themselves as in some way or other appertaining to it, and as promising to contribute to the explanation of the nature of the art defined by it.

Præcognita de naturâ Logicæ, is the title prefixed to the first chapter in the compendium of Sanderson, in which the definition of logic with these explanations subjoined to it, is contained.

Though taken in detail, the mode of execution has appeared, as will be seen, susceptible of considerable amendments, the design has been regarded as highly useful, and of the sketch therein contained that which here follows, though not a copy, will be seen to be an imitation, or at any rate a sketch executed on a plan of which the general idea, and some of the principal lines, were derived from that source.

1. Uses, *Utilitates*. 2. End in view, *Finis*. 3. Functions, *Officia*. 4. Object, *Objectum*. 5. Subject, *Subjectum*, as exhibited in six modifications. 6. Parts, *Partes*, of which three in number are brought to view. Such is the list of the characteristics of logic, as exhibited by Sanderson and other compendialists; exhibited, though not under that or any other common appellative, unless the word *præcognita*, things foreknown, be taken for that appellative.

1. General end in view, the attainment of which the art of logic keeps, or ought to keep, in view. 2. Field of exercise appertaining to this art. 3. Operations to which it is capable of giving direction and assistance. 4. Faculties to which it gives direction and assistance. 5. Instrument, viz. *Language* employed in giving direction and assistance to these same faculties in the performance of these same operations. 6. *Functions*, to the exercise of which in relation to other arts and sciences it is capable of giving direction and assistance. 7. Uses to which it is applicable. Such is the list of the articles, which, under that same name of the characteristics of the art, will by means of the explanations respectively given in relation to them, be under these same denominations employed in the explanation of it.

SECTION II.

Characteristic the First.

End in View or ultimate Object of Logic.

The pursuit of every art being a course of action, and, in the instance of man, as in that

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of every other sensitive creature, well-being being, in some shape or other, the end of every action, it is not in the nature of the case, that, for the ultimate end, the particular art here in question should not have this for its object; well-being, which, considered as having existence during any given portion of past time, will always have been directly as the magnitude of the aggregate of the pleasures of all sorts experienced during that portion of time, and inversely, as the magnitude of the aggregate of pains of all sorts experienced during that same portion of time.

Such is the explanation which, how premature soever it may seem, it seemed advisable to give, lest, though it were but for a moment, any the least cloud should hang over the import of so important an appellative.

Well-being! But is not this (it may be asked) the end in view, the ultimate as well as direct and immediate object of another and very different branch of art or science, distinguished by a separate and a different name, viz. Ethics!

Undoubtedly, but by being the object, the ultimate object of that other art, it is not the less truly and properly so of the one in question. As every action whatsoever, so must every art (for *art* is but an aggregate of actions) have this for its object—have this same common result, viz. *well-being*, for its ultimate object.

If Ethics have this for its object, so has Medicine, for example—so has cookery; and this same result, Logic in so far as it can, with propriety, be said to be of any use, may likewise, with equal propriety, be said to have for its object, meaning for its ultimate object.

If, in the pursuit of *well-being*, it be the province of Ethics to take the direction of human conduct, in that same pursuit it is the province of Logic to take the command and give direction to the course of Ethics itself. From having his generals under him, the commander-in-chief has not the less command of the army committed to his care.

Logic, like every other branch of art and science, in a word, like everything else, is not any otherwise, nor any further deserving of regard, than in so far as it is capable of being of *use*. But of *use* in any intelligible sense, neither can this, nor anything else ultimately be, any further than it has been or is capable of being conducive to the diminution of pain in some shape or other, or to the increase of pleasure.

Be that as it may, assuredly it is not on any other account that it will ever be taken for the subject of consideration in any part of the present work.

In this instance, as in every other, the usefulness and value of art and science in every shape depending altogether upon their conduciveness and subserviency to this universal end, so in the comprehensive sketch which will further on be given of the field of art and science, it is from this tendency to a common end that the connecting principle, or common bond of relation, by which the several arts and sciences are connected with each other, will be viewed; and, from this common bond of connexion, will be deduced such a plan of encyclopædical arrangement as should naturally be more instructive, and, as such, more interesting than any which has hitherto made its appearance.*

After a sketch taken upon this principle, if *dryness* and *uninterestingness* continue to be, as hitherto they seem to have been generally numbered among the properties of this art, it will, at any rate, be, not in respect *of the end to which it is directed*, but in respect to the principles and plan observed in treating of it.

Section III.

Characteristic the Second.

Field of Exercise appertaining to this Art.

The definition of this art being given, as above, the field of its exercise has been already given. Within it is contained the field of every other art, the field of every science, the field, in a word, of every occupation, such alone excepted, if such there be, to the exercise of which, in the most advantageous manner, no exertion of mental power is either necessary or in any way conducive.

The word *field* having, to the purposes of Logic, been found of special and superior use, while, at the same time, other terms there are which have also been employed to these same purposes, a few words to show the title it has to preference here may, perhaps, not be found altogether ill bestowed.

Sphere, circle, subject-matter, subject,—in these four will be found comprehended, it is believed, a complete list of these its rivals.

As to the word *sphere*, on many occasions it may, no doubt, be employed without much difference in the article of convenience. It labours, however, under considerable disadvantages. 1. Being borrowed from Astronomy, it is apt to present to view, as often as employed, the idea of that abstruse and irrelevant science, and thereby to diffuse over every subject in which it is employed a considerable degree of abstractness, and add difficulty to difficulty,—thickening the obscurity which unavoidably and perpetually overhangs the nomenclature of Logic, which is sufficiently thick without any additional shade to thicken it.

2. A field is susceptible of corners, and, in a word, of every variety of shape, and to the number of describable sources of division according to which it is capable of being parcelled out, there is no limit. A sphere has no cor-

* See Appendix B, and Chrestomathia, Appendix IV., supra, p. 63, *et seq.*

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ners, and to the number of sources of division according to which it is capable of being subjected to division, there are determinate limits.

3. The fields of the several arts and sciences, parcel of the general field of art and science, and of the still more complex field of human occupation, are, with reference to one another, contiguous and mutually coincident, and may, upon some, if not upon all, occasions, be considered as situated on the same level. But, amongst the objects presented to view by the word sphere, there cannot be any such mutual coincidence or contiguity, and, when spoken of on the same occasion, some are higher, others are lower or inferior.

4. The field of art and science is capable of extension, and is continually receiving it; and the greater the extension it receives, the greater, there seems reason to believe—the greater *cæteris paribus*—is the quantity of well-being possessed by the aggregate of mankind. Of no such property as extension in particular parts is a sphere susceptible;—if it be so extended it ceases to be spherical.

A *circle* is a word that is more or less exposed to the same inconveniences. To the last of them in a more practically pernicious degree. The circle of the sciences is a phrase to which, in former days, much importance was attached, and which continues in frequent use. Of the emblem thus employed what are the practical inferences? That, in the track of science, no advance can be made; that by every foot that enters upon the circle, the track taken can be no other than that which was travelled in by its predecessors;—that a man may go round and round, and when he has gone as far as it is possible for him to go, he will find himself at the point from which he set out.

Subject-matters and *subjects*.—As to these expressions, they are not pregnant with any such delusive allusions, as above; but they do not come up to the purpose in question; and there is another purpose for which they are in demand.

Field is wanted for the designation of the whole of the expanse. Fields in the plural are seldom wanted. Subject-matter and subject are wanted for the expression of this or that particular article considered as situated on or within the compass of this or that field. Accordingly, in the plural number as well as in the singular, there is a continual demand for these words.

By the word subject, the idea conveyed is that of a moveable solid capable of being viewed and handled in all imaginable directions,—by the word *field* that of a portion of an immoveable whole, of which the surface alone is capable of being thus dealt with.

Real entities and fictitious entities.—To one or other of these denominations will be found referable everything which, with reference to this art, can be considered as comprised under the denomination of a subject.

Section IV.

Characteristic the Third.

Operations, *to the performance of which Logic is capable of affording direction and assistance.*

Relation of this Characteristic to the preceding ones.

As to the several *operations* which the human mind is capable of performing in that field in pursuit of the above-mentioned general end, or any of its modifications, and therein in pursuit of any subordinate ends, considered as capable of serving in relation to it in the character of a means;—whatsoever be the subject in relation to which action is required, the following operations will be found capable of being performed in relation to it,—operations all of them contributing or tending to the attainment of the above-mentioned general end, in so far as the *discipline*, the art or the science, the practice or act, in question, is, in its nature, in any shape applicable to that end.

When these are considered as so many species of operations, to the due, and apt, and successful performance of which the art called Logic is capable of being rendered subservient, this topic,—the topic of mental operations,—is considered as susceptible of being applied to the several subjects of the same art, as above-mentioned, and in that respect is considered in what, in opposition to abstracted or *abstract*, has been called a concrete or practical point of view.

A different point of view, which, under the name of abstract, has this instant been spoken of, is that in which the *operations* performable are considered as corresponding to so many faculties of the human frame, by or by means of which they are performable. On which occasion the same denomination is capable of serving, and, accordingly, has, in great measure, been made to serve, for the operation itself, and the *faculty*—the fictitious part or member of the mind—by or by means of which the operation has been considered as being, and to be performed.

These operations being so many modes or species of *action*, which is itself but a mode of *motion*, possess a sort of half reality, and the names of them belong, accordingly, to a class of names which, regard being had to names of substances—the only real entities—may, as will be observed in another place, stand distinguished by the names of semi-real entities. But as to the several correspondent faculties, these belong to the class of purely fictitious entities, feigned in virtue of an irresistible demand, for the purposes of discourse.

A motion has a something next to real that corresponds to it, and of which indication is given by its name, viz. the path taken by the moving body at the time during which it is said to be *in motion*. Considered as distinct

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from the mind itself, a *faculty* is an object manifestly altogether void of real existence. The name of it is the name of a purely nominal and fictitious object, framed for the purpose of holding up to view the imaginary cause or productive instrument of some real effect. The word which is the name of it is not indicative of anything but the *operation* which, when called into exercise, it performs, if it be an active faculty, or the impressions which, if it be a passive faculty, it receives.

Of the several distinguishable mental operations to which the art of Logic may, in one way or other, be found capable of affording direction and assistance, so great is the multitude, (of the whole number of operations in which the human mind is capable of bearing a part, there not being one to which, from this source, direction and assistance is not in one way or other capable of being lent,) so ample is the number and so great the variety, that, for bringing to view the points in which they agree, together with those in which they disagree, and thus presenting a clear and distinct idea of the nature and differential character of each, it will be necessary to distribute them into distinct groups or classes, which, in the course of the following pages, will be brought to view. Placing first those which, being most simple, require not for their explanation anything to be said of the others, and so on.

Mental Operations, Class I.—Operations, in the performance of which the subject is considered as being regarded *entirely*, i. e. in an entire state, and at the same time *singly*, (i. e. not in conjunction with others,) without regard to past or future time, and without regard to any person other than the person himself by whom the operation is considered as performed.

1. Perception, conception, apprehension. When perception has place, the source or perceptible object from which it is derived being an individual portion of matter, or real corporeal entity,—(a body coming under the denomination of *body*—of a body,)—*impressions* are, at the time in question, made on *sense:*—on some one or more of all of the senses to the cognizance of which the object stands exposed. Of the perception thereupon obtained, these *impressions* are the immediate object and subject. The body itself, *i. e.* the existence of it, is but in a secondary and comparatively remote way the object or subject of perception. Of this supposed source of the perceptions that are experienced, the existence is, strictly speaking, rather a subject of *inference* than of perception. Of inference, judgment, ratiocination, which is liable to be erroneous, and in experience is very frequently found to be so.

Scarcely does a perception take place but it is accompanied—accompanied, generally, without any *consciousness of*, because without any *reflection on*, without any *attention paid to* it—by a correspondent *judgment* or act of the *judgment* faculty.

At the time when the perception takes place, the mind may either be more or less *active*, or purely *passive*, in relation to it; it is only in so far as it is more or less active that any *operation* can, with propriety, be said to be performed.

If the mind be purely passive, the perception is the work of the simply perceptive, a branch of the intellectnal faculty. If, in any mode or degree, the mind be active in so far, the will—the *volitional* faculty bears a part in the production of it.

Conception is a word which is frequently employed to express the same import as the word *perception*, would be employed to express. In common usage the distinction is altogether indeterminate. Where any purposed distinction is observed, it is to the word *conception* that the largest and most complex sense seems commonly to be assigned. While impressions only are considered as the objects of perception, conception is considered as having for its objects, ideas, simple ideas, the copies of these impressions,—the things signified by the signs of which discourse is composed, *ex. gr.* the import of entire propositions—of a discourse composed of such propositions in any multitude, or even that of single words. In this word intimation is given of a certain degree of *complexity* in the object denoted by it, by the natural effect of the first syllable.

By the word *apprehension*, at least, if its etymology be considered, intimation is conveyed not only of action, activity, but of some certain degree of exertion of effort: *prehendo*—*apprehendo*, to lay hold of.

2. Attention.—This operation, as the etymology of the word intimates, has place in so far as by an act, by a more or less continued exertion of the *will*, and the psychological active faculty its servant, the mind is as it were fastened upon the object or subject from which a perception or conception is derived to it. *tendo*, to stretch,—*attendo*, to stretch upon.

Mental Operations, Class II.—Operations in the performance of which the subject (whether taken entire or not—taken in conjunction with others or not, and whether with or without regard to any person other than the person himself by whom the operation is considered as performed) is considered with regard to *past time*.

1. Remembrance; 2. Retention; 3. Recollection; 4. Recalling or revocation to Memory; 5. Reminiscence. These words are either synonymous, or want little of being so. The slight shades of difference by which they may be found to be distinguishable, are not for the present purpose worth attending to.

The sort of fictitious psychological entity called the Memory, is regarded as a kind of receptacle in which perceptions of all sorts that

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have ever been experienced are, in any number lodged, as likewise, whatsoever thoughts have, by composition or decomposition, been formed out of these materials, are capable of finding a place. So long as on the occasion of the entrance of the object in question into this receptacle, or of its continuance therein, or recession out of or re-emanation from it, no effort on the part of the volitional faculty is considered as taking place, no such word as operation can, with propriety, be employed in speaking of it.

Mental Operations, Class III.—Operations, in the performance of which objects or subjects more than one are considered as being, at the same time, present to the mind.

1. Judgment; 2. Decision; 3. Determination; 4. Comparison; 5. Examination.

When upon and after examination and comparison made of any two or more of the objects that have presented themselves to the mind, any *inference* is made or *conclusion* come to in relation to them by it, a judgment is thereby said to have been formed and passed—an act of the judicial faculty exercised—an operation of the judicial faculty performed.

Decision and *determination* are, with no less frequency and propriety, applied to operations of the volitional, than to those of the judicial, faculty.

Decision, from *decido*; compounded of *de*, off, and *cædo*, to cut,—is a word that represents the mind as if cutting off at a certain point the thread of examination, and thereby cutting short the intellectual process.

Determination, from *de*, off, and *terminus*, a term or boundary, intimates that, with reference to the object in question, whatever chain of examination has been carried on, has been brought to an end.

As to *judgment*, when the word is employed to designate an *operation*, considered by itself, the operation is not an act of any other than the judicial faculty; it is not an act of the volitional faculty. But the giving expression to this or to any other act of the judicial faculty is an act of the volitional faculty;—even the applying to the subject or subjects in question the faculty of attention, for the purpose of forming a judgment on, or in relation to them, this is an act of the volitional faculty.

Another object which the word *judgment* is in use to be employed to signify is, the discourse, whatsoever it be, which, on the occasion in question, has been the product of the operation so performed by the faculty so denominated.

As to *examination*, a notion that may be apt to present itself on the subject of this word is, that on the occasion of the operation expressed by it the presence of more than one object in the mind at the same time is not necessary. Applied to an object considered as entire, the observation may be correct. But an examination of any object can hardly, it should seem, with propriety, be spoken of as made, unless the mind have applied itself to the parts of the object, or some of them. It is only in this way that the import of the word *examination* can be distinguished from that of the word attention.

Mental Operations. Class IV.—Operations, in the performance of which the subject being such as presents a number of perceptions (viz. impressions or ideas, or both together,) in conjunction, the mind, in the first place, decomposes what it finds thus composed, taking for consideration from the group any one or more of its component elements, presenting them to itself or not presenting them to itself, at any subsequent point of time, either by themselves, or in an order and mode of conjunction different from that in which, as above, they presented themselves in the first instance.

1. *Abstraction.* In or by this operation, among the impressions or ideas presented, in conjunction by an object, whether present to sense or only present to recollection, and accordingly presenting a group of impressions, or presenting nothing more than a group of ideas corresponding to and derived from the group of impressions presented by it while present, the mind, by its apprehensive faculty, lays hold of some one alone, or some other part of the whole number, leaving the rest unnoticed.

Thus, for instance, in the case of an *apple*. Applied to the touch alone, the impressions and ideas it gives birth to are those of the external configuration, the degree of smoothness or roughness, the consistence in respect of hardness and softness; presented to the eye, the impressions and ideas it gives birth to are those of shape, as before, with the addition of colour; to the smelling, those of the particular odour of the fruit; to the taste, the particular flavour. In so far as any one of these impressions or ideas is rendered present to the mind, and becomes the subject or object of perception, or thought, or attention, without being accompanied with the rest, the mental operation called *abstraction* has place.

2. *Imagination.* In so far as a number of these fragmentitious ideas formed by abstraction are put together by the mind and formed into new compounds, into compounds which either do not exist in nature, or have not as yet presented themselves to the mind of the person in question, in and by the means of a body already existing in nature, the operation whereby this effect is produced, is styled *imagination*; and in consideration and in respect of it, a correspondent faculty is considered as having existence,—a faculty termed the *imaginative* faculty, or more shortly, by the same name as that given to the operation itself—viz. imagination.

Thus, taking from the fruit of the apple-tree its shape, and at the same time from any piece of the metal called gold its weight, colour, and consistency, imagination formed the golden

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apple, the produce of the garden of the Hesperides.

3. *Invention.*—In so far as any product, formed as above by the imagination, has received, or is considered as receiving a fixed description, or as serving as a guide to active talent or practice, in such sort as in the pursuit of some particular end, to produce effects either new, or produced in any respect to greater advantage than before, the operation is called *invention.**

Mental Operations, Class V.—Operations, on the occasion of which a number of entire objects, whether masses of matter or assemblages of ideas, are present to the mind at the same time.

1. Designation,—simple or individual denomination. For the performance of this operation, the conjunct presence of a number of objects not greater than two suffices: the *object* to which a name is to be attached, and the *name* which is to be attached; the *designand*, or object which is considered as requiring to be denominated, and the designation or sign, which,—when sufficiently associated and connected with it, when lodged in the mind in contact with it for a sufficient length of time, and thus called up, in conjunction with it, with a sufficient degree of frequency,—is found by experience to contract, as it were, a sort of adhesion to it; in such sort that when, by the person in question, the sign, being called up out of the *memory*, is detained by the attention, the idea of the *object* signified is thereby rendered present, and is continued in that state so long as the sign is present in that same state.

A sign of this sort, by which one individual object, and no more, is designated, is what has been termed by grammarians a *proper name.*

2. Denomination,—or say common-collective, or generic denomination. In so far as the sort of operation thus designated and denominated has place, the same sign is made to designate, and, upon occasion, render present to the mind, two or any greater number of individual objects: two or any greater number of individual objects, by whichsoever of the two faculties of the mind, the memory or the imagination, are rendered present to it.

Thus, while the human species contained but one individual, viz. Adam, individual designation was the only operation of this class which an intelligent and conversing being, such as an angel or devil, having occasion to designate him, could have occasion to employ in the designation of him; but no sooner had Eve received a separate existence, than the occasion for *denomination*, i. e. collective designation or denomination, came into existence: a name such as should be capable of designating the species which, by the addition of this second individual, was now formed. One species was then already in existence; at the same time, the two sorts of subordinate species, or rather two species at once, viz. the two species formed together by the difference in respect of *sex*, received already a sort of potential existence,—were already formed in *potentia*. At the birth of Cain, the species corresponding to the male sex received an actual existence; Adam and Cain the individuals. On the birth of Cain's eldest sister, the species corresponding to the female sex, received the like existence; Eve and her anonymous daughter, whoever she were, the individuals.

3. Methodization or arrangement. Of this operation, as will be seen more particularly further on, under a separate head thus denominated,* there are two distinguishable modes, for the designation of one of which the words *collective* or *cumulative*; of the other the word *lineal* may be employed; or, instead of the lineal mode of methodization the term methodization by means of procedure may be employed.

To collective or cumulative methodization, the use of one of the operations above designated by the term *denomination*, viz. collective denomination seems to be an altogether indispensable requisite. A general name is the *common*, the necessary tie, by which a number of general or abstract ideas are fixed and fastened together in the mind.

In what respect, then, is collective methodization distinct from collective denomination? In this only, that when the word *methodization* is employed, a multitude of groups, or collections of general ideas, are considered as being at the same time formed or bound together, and at the same time so constituted and disposed of, that two or more, each having its collective name or denomination, are connected together by, and comprehended within, some common name: some name which, being common to them both, and not applied to any other, serves, at the same time, to distinguish them from all objects to which different names have been applied: the new and larger group thus formed, being at the same time in company with some other group or groups formed in the same manner, formed into still more capacious multitudinous groups, and so on through any number of groups of ulterior aggregation.

The course by which *lineal* methodization, or arrangement, is performed, is this; of the several subjects (in the present instance the several denominations, on which, as on its subjects, it is performed) some one presents itself, before any other has presented itself to the mind, next to that some other, and so on throughout the whole number; and thus in this same order, one after another, they all present themselves.

To effect and secure the accomplishment of this object, the words or visible signs by which

* See passim Methodization, chapter x.

* See below, chap. x.

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these several groups are respectively represented and presented to the mind, are so placed as to present themselves to the eye of every reader in the course or order thus appointed as above.

From this master-operation, all the other operations, in some way or other, several of them directly, are wont to receive direction and assistance.

The operation of *communication* of ideas, as performed by its peculiar instrument *discourse* or *language*, will come in the next and last place to be considered. To this operation, that of methodization will be found capable of rendering the most essential, and, in some measure, indispensable assistance. But antecedently to this, so, and in an immediate and manifestly visible way will it be found capable of rendering assistance to the operations of *retention*, *judicial decision*, and *invention*: and the larger the scale upon which it happens to them respectively to be performed the greater the assistance.

Mental Operations, Class VI.—Operations, by the performance of which, by means of the operations of designation and expression, communication of the ideas formed in *one* mind is made to, and those ideas are transferred into another mind.

1. Discourse, or discoursing. 2. Expression.

In the course of this operation, ideas having been, in one mind, formed or lodged, and therein associated with, and, as it were, attached and fastened to, certain of the *signs* of which discourse or language is composed, are out of that mind *expressed*, i. e. pressed out; for the purpose of their being *received into*, or say, *finding reception in* another.

1. Signs, by means of which the operation is performed. 2. Minds to which, and modes in which application is made of these signs;—from these two sources, taken together, may the operation be seen to receive whatsoever modification it admits of.

1. Signs, by means of which the operation of discourse is performed.

A difference in the nature of the *signs* capable of being employed, is produced by a correspondent difference in the nature of that one of the five *senses* to which the discourse is made to address itself.

The *hearing*, its organ the ear; the *sight*, its organ the eye; the touch, its organ the skin, and more particularly the skin of the hand;—to all these senses has what is called *discourse*, been made to address itself. *Audible*, *visible*, and *tangible*, such, accordingly, has respectively been the nature of the *signs* of which, in these several cases, this organ of the mind has been composed.

Till a comparatively late point in the time of human existence, of all these sorts of *signs*, those which address themselves to the *ear* were almost the only ones in actual existence; to the infinite multitude and variety of these, the few that as yet, in those days, addressed themselves *immediately* to the *eye*, found but a feeble supplement, and a still more feeble and inadequate *succedaneum*.

Through the medium of the French word *Langue*, a tongue,—*Language*, in French *Langage*, the discourse of the tongue, is derived from the Latin, *Lingua*, a tongue. When addressed *to* the ear, it is *from* the tongue that the discourse addresses itself. For discourse, for the product of the operation called discourse, in the form in which it addresses itself to the eye as contradistinguished from that in which it addresses itself to the ear, neither the French, nor the Latin, nor the English, affords any proper appellative.

French or English *language*,—French or English *Tongue*, if applied to the contents of a manuscript, or a printed book,—a solecism, a palpable contradiction and inconsistency will, upon consideration, be found involved in any one of these expressions.

Yet, for these solecisms, however palpable, the demand is frequent, and so urgent as scarcely to be resisted.

Writing, including its comparatively recent improvements, such as printing, engraving, &c., is, in every case, discourse addressed to the eye. To this organ, discourse, in this form, has been capable of addressing itself in either of two ways:—1. In a remote way, through the medium and intervention of discourse addressed to the *ear*, i. e. of articulate sounds. 2. In an immediate way, without the intervention of discourse in that or any other form.

In the first case, the audible sounds are the immediate signs of thought; and it is of these audible signs that the visible characters are the signs; and it is only in this comparatively remote way that the function of signs of thought is performed by the visible characters.

In the other case, the function of signs of thought is somehow or other performed in an immediate way by the visible characters.

Of these two modes, the former is the only one familiar to the generality of civilized nations; the other is exemplified in the vast Empire of China, in the Empire of Japan, and in some of the states subject to the dominion or ascendancy of the Chinese.

A remarkable circumstance is, that the Japanese, whose audible instrument of discourse is not the same with that of the Chinese—has little or no affinity with that of the Chinese, employ the same visible instrument, the same characters; and so in the case of some of those other inferior states in that part of the world.

Compared with the footing on which it is in European practice, great must be the incommodiousness of the instrument of discourse, as employed in these Eastern nations; and, accordingly, the more particularly it is seen into, and the nature of it understood, the more manifest do the imperfections under which it labours become. But, for the consideration of these imperfections in the instrument of dis-

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course, and the consequent imperfections in the state of human thought, the proper place will be under the head of language.

In the meantime, concerning this inaudible and purely visible instrument of discourse thus much is *certain*, viz. that of the characters of which it is composed, there is not one that can ever be *spoken of* but through the medium of an audible sign. But if, on the occasion of its being spoken of, each visible sign is provided with a correspondent audible one, it has thereby a distinct name, and in this way, and thus far, the Chinese instrument of discourse is placed upon a footing with that of Europe.

A name, therefore, in a word, an audible name, every such visible character cannot but have, in, whatsoever nation employed,—the Chinese, for example, or the Japanese. But what is possible is, that, in one nation, a given character has one audible name, in another nation, another; and this is, as reported, actually the state of the case.

The *touch* has been mentioned above as one of the three senses, through the medium of which the operations of discourse are capable of being performed. This, accordingly, is a medium through which, in the case of the blind, by the help of modern ingenuity, it is customarily carried on. But where this is the one of the three conversible senses employed, it is never any otherwise than in a remote way, viz. through the intervention of one of the other two conversible ones,* if such they may be called.

In the case even of a blind person, this medium may be composed, not only of the ordinary audible, but of the ordinary visible signs, if so it be that he was once in possession of the sense of sight, and, at that time, made an acquaintance with the use and import of the ordinary visible characters.

Of late years the faculty of discourse has even been communicated to persons who, from their birth, were deaf; and, from that cause, or any other, at the same time, dumb;—but, in all these cases, such persons have been in possession of the sense of sight, and thereby have been rendered susceptible of discourse, and conversed by means of visible characters.

Should a human being ever be found unfortunate enough to be, from his birth, destitute of the sense of sight, as well as of that of hearing, to communicate to him the faculty of converse, or discourse in any degree, or to any purpose, will, it seems evident, be necessarily found altogether impracticable.

In the same deplorable case will any person be, who, being born deaf and dumb, shall lose his sight without having as yet received, in any competent degree, that sort of instruction, intellectual and literary, of which persons labouring under that complicated imperfection are susceptible.

Thus much, for the present, as to the *signs*, by means of which the *operations* denoted by the collective appellation *discourse* are carried on, and the correspondent faculty exercised.

The different classes, called *Parts of Speech*, into which, in each and every particular language these signs have been distributed, or found distributable; the mode and order, in respect of priority, in which these signs appear to have been formed;—these are topics which will be found in our way at an ulterior stage of our progress.

2. *Minds* to which,—*modes* in which application is made of these *signs*,—of the signs of which discourse or language is composed.

The mind to which, on any occasion, application is made of these signs, is either the mind of that person alone by whom they are employed, or the mind of some other person; in the latter case, the *use* made of them may be styled the *transitive* use; in the other case, the intransitive.†

Thus it is, that how intimately soever connected, *designation*, simple designation and discoursing, are different operations; without *designation*, discoursing, it is true, could not have taken place; but, without discoursing, designation may, and it frequently does, to a great extent, take place.

Not that, had it not been for the purpose of *discourse*, *designation* there seems reason to think, would ever have taken place; it is, accordingly, as it should seem to its intransitive use, that *discourse* or *language* is indebted for its existence.

So much more conspicuous is the *transitive* use of discourse or language, that, in comparison with it, the intransitive seems scarcely to have obtained notice.‡

In importance, however, it is second only to the transitive use. By its transitive use, the collection of these signs is only the vehicle of thought; by its intransitive use, it is an instrument employed in the creation and fixation of thought itself. Unclothed as yet in words, or stripped of them, thoughts are but dreams: like the shifting clouds of the sky, they float

* Examples,—1. Finger language. 2. Tangible diagrams. 3. Tangible marked cards. 4. Tangible musical notes.

† By some of the grammarians whose works are in present use, *verbs* stand distinguished into *transitive* and *intransitive*; *transitive* are those which are most commonly termed active, *intransitive* those which are commonly termed neuter. An instance of the *active* or *transitive* verb is *ferio*, *I strike*; an instance of the *neuter* or *intransitive* verb is *curro*, *I run*. Not but that in the intransitive verb *agency* is expressed; but in this case so is *passion*, or say, to avoid ambiguity, *patiency* likewise; and so it is that in one and the same person the agent and the patient are comprised: the agent, the volitional part of his mind; the patient or patients, those parts of his bodily frame by which the action or operation called *running* is performed.

‡ The transitive was the only original one.

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in the mind one moment, and vanish out of it the next. But for these fixed and fixative signs, nothing that ever bore the name of *art* or *science* could ever have come into existence. Whatsoever may have been the more remote and recondite causes, it is to the superior amplitude to which, in respect of the use made of it in his own mind, man has been able to extend the mass of his language, that, as much as to anything else, man, it should seem, stands more immediately indebted for whatsoever superiority in the scale of perfection and intelligence he possesses, as compared with those animals who come nearest to him in this scale.

Without language, not only would men have been incapable of communicating each man his thoughts to other men, but, compared with what he actually possesses, the stock of his own ideas would, in point of number, have been as nothing; while each of them, taken by itself, would have been as flitting and indeterminate as those of the animals which he deals with at his pleasure.

Of the seven or more distinguishable mental operations, to the performance of each language, now that it is formed, is instrumental and subservient,—viz. 1. Perception; 2. Recollection; 3. Attention, &c.; 4. Abstraction, whence imagination and invention; 5. Judication; 6. Designation; and 7. Converse, or communication of ideas; this of communication of ideas is but one. Look back upon these others, and you will see there is scarcely one of them to which, in respect of this its intransitive use, to which, in the character of a spring, as well as a regulator of thoughts, language, if not indispensably necessary, is not, in an eminent degree, subservient.

Of this proposition, the truth will appear in a still stronger and stronger light as the thread of the present discourse advances.

So far as depends on the personal use of each individual, independently of those uses which depend on the communication of his thoughts to other individuals at pleasure, for giving *determinateness*, and, in some degree, *permanence* to the matter of thought,—language, even of the partly *audible* kind,—language, even though destitute of the further help afforded by those *visible* signs which, in their nature, are susceptible of a duration equal to that of the whole human race, affords of itself no inconsiderable assistance.

But, in comparison with the *determinateness*, the *permanence*, and thence the *improvement* of which, even in the mind of though it be but a single individual, language is susceptible, by the means of visible signs, of improvement in itself, not to speak of subserviency to improvement in other objects, the utmost which it is capable of deriving from *audible* signs alone is but inconsiderable indeed.

By being thrown into measure composed of an appropriate mixture of syllables, such as, with reference to each other, shall require a comparatively long and a comparatively short portion of time for their utterance; by means of the additional association thus formed between *import* and sound, and by that means between import and import; by this means, or instead of, or along with, these modifications; by means of the regular recurrence after periods of limited and determinate length of similar sounds;—in a word, by *rhythm*, or by *rhyme*, or both,—additional permanence, or rather additional chance of permanency is, and at a very early stage in the progress of society and language, amongst most nations, has been given to *audible* language. But, after the utmost aid that can, in this way, be given, has been given; that which has been, or can be given, in this way, to the improvement,—that is, to the clearness, correctness, and extent of thought,—always has been; nor, in the nature of the case, would, or can, ever fail of being universally inconsiderable in comparison with that which has already been given,—not to speak of what further may remain capable of being given, by visible, that is, by permanent language.

Section V.

Characteristic the Fourth.

Faculties to which Logic gives Direction and Assistance.

The faculties which it may occasionally belong to Logic to call forth into exercise, and give direction and assistance to, are neither more nor fewer than the whole number of the faculties distinguishable in the human frame.

If there be any to which it will be seen not to apply in so immediate and constant a way as it does to the rest, yet neither can these any more than those, fail to fall on this or that occasion, for this or that purpose, within the field of its cognizance.

Of the faculties of the human frame, the following may be considered as the proximate division.

Passive and *active*,—in one or other of these two divisions may every faculty distinguishable in the human frame be considered as included.

Physically passive and psychically passive,—under the one or other of these appellations may be included whatsoever faculties belong to the class of sensitively passive ones; physically passive, those sensitively passive faculties by which man is enabled, and made to experience such sensations as present themselves as having their seat in some determinate part of the body; psychically passive, the sensitively passive faculties by which man is enabled, and made to experience such sensations as not presenting themselves as having their seat in any determinate part of the body,—spring up, to all appearance, immediately, and in the first instance, in the mind.

Pathematically passive, and *Apathematically* passive,—under one or other of these appella-

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tions may be included whatsoever faculties belong to the class of physically passive ones; Pathematically passive, corresponding to those corporeal impressions which are accompanied either with pleasure or pain; Apathematically passive, corresponding to those impressions which are unaccompanied either with pleasure or pain,—with feelings of the pleasant, or with feelings of the unpleasant class.

While with the appetite of thirst upon him, a man drinks,—the liquid being, for example, water, a liquid destitute of all exhilirating, as well as of all sapid properties,—so long as the appetite is not yet completely satisfied, a sensation of the pleasureable kind continues;—when the appetite is completely satisfied, the operation may continue some little time without being productive of pain any more than of pleasure; but, continued for a certain ulterior length of time, it becomes productive of the sort of pain applied to the purpose of extracting confessorial evidence, under the Romano Gallic, Romano Batavian, and other modifications of the Romano Imperial Law.

Pathematically passive, and Apathematically passive,—to impressions made *immediately* on the mental part, without passing (otherwise than by the intervention of those signs of which discourse is composed) through the corporeal part of the human frame, may this same distinction be found to apply with no less propriety and use, than in the case just mentioned.

In the presence of three persons, A, B, and C, an article in a newspaper, respecting the death of a person therein mentioned, happens to be read; to A, the deceased was altogether unknown; to B he was an useful friend; to C, a troublesome enemy; in the mind of A the intelligence produces no sensation at all; in that of B an unpleasant one; in that of C, perhaps a pleasant one.

Originally active and *derivately* active,—under one or other of these appellations may be comprised every distinguishable modification of the active faculty of the human frame; to the head of the originally active faculty may be referred every exercise of the will, or determination of the will—or say volitional faculty, when considered apart from any act or operation performed in consequence and pursuance of it. An instance of the exercise of the originally active faculty is,—a mere wish, for the gratification of which, whether by reason of consciousness, of want of power, or at the suggestion of prudence, or through any other cause, nothing is done, no act is performed.

Physically active and psychically active,—under one or other of these appellations may be comprised every modification of the derivatively active faculty; to the head of the physically active branch may be referred every human act, in so far as any corporeal organ is employed in the exercise of it; to the psychically active branch, every human act in so far as the mind is employed in the exercise of it.

The observation made of, and consideration bestowed upon, these distinctions, are exercises of the psychically active branch of the derivatively active faculty of the mind, in the instance of him by whom these pages are composed; the committing to paper the signs of them, in the form of a written discourse, was an exercise of the physically active branch of the same derivatively active faculty: antecedently to the performance of these several operations, the determination to perform them was an exercise of the originally active faculty, the volitional.

Descending lower and lower into the region of particulars, with logic for its guide, sooner or later the mind would come to that list of *faculties* which, as already intimated, correspond not only in nature, but, with little exception even in name, with the articles already brought to view under the general name of operations,—so many *operations*, so many *faculties*; corresponding to each operation, a faculty considered and spoken of as if enabling a man to perform that same operation.

Section VI.

Characteristic the Fifth.

Main Instrument of Logic.

The grand instrument of thought, in general, and of thought directed to the purposes of *logic*, in particular, is the faculty of *discourse*, including the faculty of *speech*.

Under the head of *operations*, in or to the performance of which logic is capable of being rendered serviceable, mention was made of the faculty of *expression*, of *discourse*, of *converse*. Correspondent to this, as to any other *operation*, a demand may exist, and at any rate in the present instance, does exist for the mention of a correspondent *faculty*, say the faculty of giving expression to thought, the faculty of carrying on discourse, the faculty of holding converse with other persons, or say more concisely, the faculty of discourse, the faculty of converse, of which the faculty of *speech* is but a modification, and no more than one out of several modifications.

By means of this faculty, by the performance of the correspondent operations, a correspondent product has, in every nation, in every tribe or group of human beings, howsoever barbarous and uninstructed, been brought into existence. Numberless are the shapes in which the product has, among different assemblages and races of men, made its appearance. In whatsoever of these shapes it has made its appearance, one general appellation, *language*,—a language, is applicable for the designation of the collection of *audible signs*, of which, with or without a correspondent collection of *visible signs* or *characters*, it is composed. So many different collections of these signs employed by so many different tribes in the designation of the same collection of ideas, so many different languages.

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Of the sort of product thus everywhere formed, so great is the importance, so universally extensive the *use*, that for all sorts of purposes there may be convenience in considering it, and speaking of it, in the character of an instrument in the hand of the *mind*, and more particularly in the hand of logic.

That language is an instrument of discourse, of converse, of communication between one mind and another, that it is the product of the sort of operation called *expression, discourse, converse*,—the work of the correspondent faculty: to speak of it in any such way is but tautology. But, as has already been noticed, it is an instrument not only of *discourse*, but of *thought* itself; an instrument by which not only are perceptions and ideas *communicated*, but ideas are formed—an instrument without the aid of which a man would neither be able to communicate to other minds any part of the thoughts of which the stock of his own mind consisted, but without which the greatest stock of those possessions which it would be possible to accumulate in his mind, would be but in an inconsiderable degree more ample than that with which the mind of the species of animal, be it what it may, which, in the scale of perfection, approaches the nearest to his own, is commonly provided.*

Accordingly, while on the present occasion, for the purpose of being held up to view in the character of an instrument, an instrument of thought as well as converse, it is at the same time taken for the subject of converse; it has, moreover, first, in the character of an instrument of thought, then in the character of an instrument of converse been employed and operated with.

Section VII.

Characteristic the Sixth.

Functions of logic, or functions to the performance or exercise of which, in relation to other arts and sciences, logic gives direction and assistance.

By the word *functions*, if it be not considered as exactly synonymous to the word *operations*, the mind will naturally be led to the idea of the sort of person expressed by its conjugate *functionary*—a *functionary*, considered in the character of a person, by whom, in virtue of some special engagement taken, or task undertaken by him, these several operations will, in the prosecution of some special design or other, in relation to this or that subject or subject-matter, come to be performed.

1. Learning. 2. Using, practising, employing, or applying. 3. Teaching. 4. Improving—viz. the *acquirement*, the *art*, the *science* in question: to one or other of these heads may be referred whatsoever course of operations, considered as having for their ideal subject-matter, any branch of art or science, have been in use to be considered as capable of being designated by the name of functions, any or all of them capable of being at the same or at different times exercised by the same hand, but all of them capable of being considered as the work of so many different hands, or of the same hands at different points of time.

Of the courses or modes of action, for the designation of which the word operation was employed, some there may be that may be found pre-eminently or even exclusively applicable to this or that branch of art or science, inapplicable to this or that other.

Of the more extensive courses of action for the designation of which the word function is here employed, there is not one that is not alike applicable, without exception or distinction, to every branch of art and science.

Section VIII.

Characteristic the Seventh.

Uses of Logic, or Uses to which Logic is applicable.

In this case, as in every other, in the instance of this art as in regard to any other, a use is either a modification of the universal *end*, i. e. *well-being*, or a subordinate and subservient end, i. e. a *means* capable of being employed in contributing towards that same universal end.

Be the thing, be the object what it may, if it neither perform, nor contribute to the performance of service in either of these shapes, it is of no use,—real use it has none.

If it have anything belonging to it that can, with propriety and intelligibility, be termed use, it must be either by giving increase in a direct way to the aggregate mass of pleasure, or by applying defalcation to the aggregate mass of pain; or else by contributing or tending to contribute, in some way or other, to the production of one or other, or both of those ever desirable and ultimately only desirable effects.

Of the field of exercise of this art a sketch has already been given above; the aggregate of its uses is coextensive with that field.

Operations, faculties, main-instrument functions—the relation borne by logic to all these articles has just been brought to view: by the art of logic, assistance and direction is given to the mind, in the carrying on of all these its various *operations*, in the exercise of these its *faculties*, in the giving employment to that main instrument, in the performance of these its functions. Thus extensive and diversified are its uses: always remembered that on each occasion it is only in so far as, in and by the direction and assistance so given by it, in-

* Of the distinguishable classes of operations in which the human mind is wont to exercise itself, the formation and employment of this instrument, viz. discourse is one, and of the others there is not one to which it is not in a high degree subservient.

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crease is, in some shape or other, given to the balance on the side of happiness, that any use that can be made of this or any other instrument can be of any *real value*.

CHAPTER III.

Præcognita: or, Preliminary and General Indications concerning Logic, according to the Aristotelians.

Section I.

Definition of Logic according to the Aristotelians.

"An instrumental art, directing our mind into the cognition of all things that are intelligible."* Such, according to Sanderson, is the definition of Logic, as given by the School of Aristotle.

Before the above, in the semblance of a definition, comes this short locution—*Logic is the art* of reason. For recollection, this short phrase may not impossibly have its use: for instruction, for original instruction, it is not in the nature of it to serve.

By this *art*—such according to the account thus given of it is its nature—the human mind is directed. Good, for so it is said to be by any other art, by every one of those fictitious entities that bear the name of art, Directed? —but into and in what?—Into knowledge—knowledge of all things intelligible, the only things capable of being known, subjectible to the dominion of knowledge: into knowledge, but into nothing else.

Meantime, unfortunately, of the field which nature has thrown open to the dominion of Logic, but over no more than one part out of two, nor that the most useful, did the Grecian philosopher, in so far as this account of what he did is the true one, cast forth his shoe. In point of use, of real utility, and thence, in point of real worth and true dignity, in so far as things are separate or separable, knowledge is inferior to art; so much so, that separated from art, all the knowledge which the human mind is capable of containing, would be of no use. According to their own showing, the logic of the Aristotelians is but an useless, which is as much as to say a worthless art; and so in respect of no small part, though not the whole of it, will it be found.

Even before the first sort of vague and uninstructive definition is completed, comes a parenthesis by which, of the narrowness of the extent attributed to the art by these its cultivators, intimation is given. "Logic," says the Bishop's Compendium, "which, according to the figure of synecdoche, is also called dialectica:" the figure of synecdoche is that figure of rhetoric by which the part is put instead of the whole. A very inauspicious commencement this for a treatise on an art which, as to one of its most useful branches, is the art of correct expression and true representation. Before so much as the definition of it is completed, in comes a formulary, taken from that art which, with little impropriety, might be termed the art of misrepresentation.

Again: the art called Logic is the same art, say they, as the art called *Dialectica*, which, being interpreted, is the art of disputation, viz. in mood and figure. What is true of the art of Logic is, that this art of disputation forms part and parcel of it; but is it thence also true that logic, and the art of disputation, are one and the same object?—that these names are names for one and the same thing? If so, then is a tree, and a branch of that same tree, the same things.

Again, Logic, according to the definition given of it by Aristotle and his followers is an art, the effect, or at least the aim of which is to lead a man to the knowledge of all things intelligible. By Aristotle and the Greek philosophers in general, knowledge taken in the aggregate was an object, on which, to judge from the comparative degree of attention paid to it, and from the comparative quantity of discourse bestowed upon it, a greater value was set then upon happiness itself; and as to its connexion with happiness, either it was regarded as something more valuable than happiness, or as something from the possession of which, in whatever part or shape, at least an equal quantity of happiness would follow, as of course.

Knowledge, or something that with them passed for knowledge, was the prerogative possession of these teachers and their disciples; for happiness, at least in so far as it was composed of pleasures and exemptions from pains, a capacity at least was shared with them by the vulgar herd: hence the transcendent and independent value ascribed by them to everything that went by the name of knowledge, or afforded anything like a promise or prospect of leading to it.

But happiness, including everything that for its own sake is worth having, everything that in itself is of any value, logic, to be of any value, must, in some way or other, be in every part conducive to; and it is only in so far as it is so conducive, that it is worth knowing—that an acquaintance with it is of any value.

Section II.

Uses of Logic—Utilitates, *according to the Aristotelians.*

As to the uses of Logic—viz. of their Logic—none, though this topic has been brought to view by them, have the Aristotelians been able to find: practice, they say, will bring them to view. But if practice will, as they

* "Ars instrumentalis dirigens mentem nostram in cognitionem omnium intelligibilium." Sanderson, lib. i. cap. i. The author's reasons for referring to Sanderson as his text-book of the Aristotelian system will be found above, p. 217.—*Ed.*

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are pleased to find it convenient to suppose, bring them to the view of the learner, why not to that of the teacher; and if so it be that to his view it have brought them, why not specify them here at once, as he has done in the case of all the other topics.

Indistinct, indeed, must have been the notions attached by these logicians to the word *utilitas*. Else, instead of referring under the name of practice to the casual observation of each scholar, how could they have avoided referring to the indication which they themselves had but that instant been giving. Necessary is this art, say they, to the acquisition of every *discipline*, i. e. of everything that is, or can be the subject of instruction, by which, if they mean anything, they mean everything that is, or can be the subject of anything that ever did go, or ever can go, by any such name as either that of *art* or that of science. So many disciplines, so many uses—for each discipline a distinct, intelligible, and undeniable use—subsequently to which, in relation to each such discipline, might have come the inquiry into the particular mode in which it administers to well-being. How much more instructive and satisfactory would this indication have been, how much more commensurate with the truth, how much more honourable to the art, would have been such an indication of the uses, than the vague and self-humiliating put off;—go, look for them!—what they are we cannot tell you: if you have good luck, sometime or other you may find some of them yourselves.

Section III.

End of Logic—Finis, *according to the Aristotelians.*

After the topic of the *uses* of Logic—the utilitates, and not before, comes in that list, the topic of the *end*, *finis ejus* (*scilicet logicæ*) i. e. the general end. But of Logic, as of anything else, what are the *uses* but either so many modifications of the general, the universal end, or so many *means* tending to the attainment of it? If so, first should have come the *end*, after that the *uses*; first the genus, then, and not till then, the species.

This end of logic, this end, when it does come, what is it? Is it the universal, the sole universal end—actually, as well as fitly and properly, the universal end—well-being, *i. e.* the maximum of pleasures alloyed by the minimum of pains? Not it, indeed: no such amplitude does it possess. It is confined, in the first place, to mere knowledge. But except, and in so far as in some shape or other, it leads to and is productive of well-being—a balance on the side of happiness, what is all the knowledge in the world worth? Just nothing.

In the next place, though the whole of knowledge it might be, and still be worth nothing, it is not so much as the whole of knowledge. Persons and things—under one or other of these heads, may be comprised the subjects of knowledge: of the two, persons a man would be apt to think the most interesting; but to persons, to what belongs to persons, it does not so much as profess to extend: it confines itself, and most pointedly, to things. Finis vero *unicus, cognitio scilicet rerum.*

Knowledge of things, viz. either scientific alone, or at least scientific with the addition of unscientific. Knowledge of *things*, *cognitio rerum*; beyond this even the pretensions of the Aristotelians, at any rate any distinct and explicit pretensions do not extend.

Far, indeed, however, were their actual *attainments*, far even their actual researches from coming up to these pretensions,

The knowledge of words, viz. the import of words,—this was the utmost point, within this field was contained the sum-total of their researches.

A certain sort of coincidence, to exhibit a demonstration, so they termed it, was with them the great work, the object, and, if attained, the fruit of all their ingenuity, and of all their labours.

This demonstration, when exhibited, what did it amount to?—an indication of a certain mode and degree of coincidence between the import of two words, and nothing more.

But this exploit, what did it require? It required that to all the several words employed the same import should have been annexed by the disputing parties. Suppose this identity to have place, then if the demonstration were correct, the opponent could not deny it without falling into a contradiction of terms. But this necessary condition suppose it in any part wanting, in this case no demonstration could take place; not so much as this faint semblance of and spurious substitute for knowledge.

Experience, observation, and experiment, these were the only processes by which real knowledge could be obtained; and by the boasted art of logical demonstration, to what extent soever employed, not a particle of knowledge was obtained through any one of these sources.

Of this assuming science, thus worthless was the end.

In truth, it was not simply worthless, it was positively pernicious. It was pernicious by drawing aside and keeping mankind for so many ages out of the only instructive track of study, as above-mentioned, into and in this uninstructive one.

But out of an ill-directed pursuit, it will sometimes happen that useful results may collaterally, and, as it were by a side-wind, be brought to light.

Though of all the propositions thus demonstrated or demonstrable, the value was, is, and ever will be equal to 0; though logical demonstration, the fruit of all this labour, was and is delusion; yet of the operations which had no other object than the formation and matur-

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ation of this fruit, many there are which have been, and will ever continue to be found, applicable to and continually applied to real and most important uses.

The demonstration of the Aristotelian may, in this respect, be compared to the philosopher's stone. The *stone* was a *nonentity;* but in seeking for this nonentity, real entities, pregnant with real and important uses, were discovered in no inconsiderable numbers: for though the stone was never discovered, multitudes of substances applicable to the purposes of medicine and the arts were brought to light.

Section IV.

Functions of Logic—Officia *according to the Aristotelians.*

Of these no unapt description is given. It is by these functions, as by so many means, that Logic operates towards the attainment of its end.

According to this account, these *officia*—these functions seem to coincide with sufficient exactness, at least, as far as they extend, with the articles herein above brought to view by the name of operations,—operations of the human mind, or rather of the whole human frame, mind and body together, to all which, in some way or other, Logic is, or is capable of being rendered subservient;—all of them, in some way or other, directed to, and leading to the universal end to which, by the guidance it is capable of affording to them, Logic itself may be, and ought to be made to lead.

Thus much for the general nature of these functions, these means, these operations. But a list, the particular list, any particular list,—anything approaching, or so much as pretending itself to be, or to lead to the finding or formation of anything approaching to a complete list, where shall it be found? Assuredly not in the custody or power of these philosophers. Of these functions, some there are—what, or so much as how many, they cannot tell. Three, however, but no more than three, are what they know of, viz. *definition, division,* and *ratiocination.*

Concerning these several functions of Logic or mental operations, how indistinct and inadequate were the notions of these Logicians will be seen in another place.

Section V.

Object, Matter, and Subjects, according to the Aristotelians.

Of this first chapter in Sanderson, the remainder consists of strings of words* to which no intelligible meaning has ever been attached, and of which no use, no intelligible, no sensible use, has ever been made, or been attempted to be made, which, without any the smallest loss, and with no small advantage, if saving of time and labour be an advantage, the reader may well spare himself the study of. Primary object, the *mind;* secondary object, *language;* subject-*matter,* viz. being and non-being: formal reason, *the second intention:* logical *instruments,* so many second notions:—all these so many other *subjects.*

Words more and more; confusion thicker and thicker: a wood in which, the further a man proceeds, or attempts to proceed, the more inextricably he will be bewildered. Greek, as usual, called in, and why?—that a meaning, which is not to be found in the Latin, may be supposed to be in the Greek.

The subject of Logic,—a subject of *information,* of *operation,* or of tractation: the subject of information, primarily the human *mind*—secondarily *discourse* or *language.* The subject of *operation,* the material subject, alias a *theme,* or the *theme,* alias *an intelligible question,* alias a πᾶν νοητὸν,—(a warming pan, a dripping pan, or a patty pan, would have been equally instructive.) The subject of *tractation,* the *formal* subject, which, if total and adequate, is a, or the, *second intention;* if principal, a *syllogism,* or more specially a *demonstration.* In all this heap of words will anything useful, or so much as intelligible, ever be found?

CHAPTER IV.

OF ARISTOTLE'S PREDICAMENTS AND POST-PREDICAMENTS.

Section I.

Of the Ten Predicaments.

Aristotle's Ten Predicaments are all of them either names of real entities or names of fictitious entities.

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* Sanderson, p. 2.—Objectum Logicæ *primario* est, *mens humana;* unde et Logicæ nomen, velut ἀπὸ τοῦ λόγου id est ratione:—*secundario* etiam et *oratio,* quæ et ipsa λόγος dicta est quâ sc. sensa mentis nostræ loquendo exprimimus.

Materia circa quam versatur, est omne illud, sive ens, sive non ens, quod vel *mente* complicti vel *oratione* eloqui possumus. Ratio autem *formalis* considerandi est *secunda intentio. Logicus* enim considerat omnia themata, non secundum proprias ipsorum naturas, sed in quantum *Logica instrumenta (quæ sunt secundæ notiones)* sunt eis applicabilia. Hinc Logicæ pro diversa ratione multiplex assignari potest *subjectum.*

Subjectum Logicæ.
- Informationis (sive objectum) est λόγος id est.
  - Primario *mens humana,* sive *Ratio.*
  - Secundario *Oratio.*
- Operationis (sive subjectum materiale) est Thema seu Questio intelligibilis πᾶν νοητὸν.
- Tractationis (sive subjectum formale.)
  - Totale et adequatum est *secunda intentio.*
  - Principale est *Syllogismus;* vel etiam magis specialiter, *Demonstratio.*

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1. Substance, the first upon the list, is a name of a real entity,—of a species of real entity,—the only species of real entity that is *perceptible*, that belongs to the class of perceptible ones.

The nine names of fictitious entities are distinguishable into two groups.

2. and 3. Group the first, *quantity* and *quality*. Both these are affections of *substance*, i. e. of substances of bodies,—of the bodies the existence of which is made known to us by our senses. According to the sort of fiction which, in these instances, is necessary to the purpose of discourse, quantity is, as it were, a smaller body, which is *in* the substance in question, or a larger body in which the substance in question is. Quality is also, as it were, a small body *in* which the substance in question is, or it is a sort of object *of*, i. e. *from* which the substance of which it is the affection is considered as issuing;—a man is said to be *of* a quality.

In neither of these two cases does any object necessarily come in question other than the substance or body; real or fictitious, of which they are respectively the affections.

4. In the instance of all the remaining predicaments, seven in number, the predicament is the name of a relation. In the fourth instance, *relation* is itself the name of the predicament, and this name is the generic name with reference to which all the remaining predicaments are specific ones. They are all of them so many species of *relation*.

Of a relation it is the essential character to suppose the existence of two objects, *between* which the relation is spoken of as subsisting. Of this sort is the image, the sort of fictitious picture which the mind presents to itself; two objects—two bodies, of any sort, A and B—between them, an interval of space. In that interval the fictitious body, the relation, is conceived as placed,—for such is the picture exhibited to the mind by the word *between*, as often as it is applied to two bodies—to two substances of any kind.

5. and 6. By the words *actio* and *passio* are brought to view two of these fictitious bodies, between which the particular species of relation respectively denominated by them are considered and represented as subsisting, or having place.

Passio, passion, cannot be conceived of without *actio, action*. Concerning *actio, action*, the truth of that proposition, if it be true, seems not quite so clear. Suppose a body moving along in space: true it is that it has no other body *on* which it acts; but it seems too much to say that it *does not act*. To move is it not to act? Every motion is it not a species of action?

7. and 9. By the word *ubi* may be considered as designated *place*, with the several modifications and relations of which it is susceptible.

By the word *situs, site*, position, is on other occasions designated the same object, *place*, or, at any rate, the mode of being of the body, or portion of matter in question, with reference to *place*, i. e. with reference to its distance from other bodies.

In Sanderson's Compendium, a distich is inserted, in and by which exemplification of all these several predicaments is exhibited. In the explanation thus given, *stabo, I shall stand*, is given as the exemplification of the word *situs*. *Standing*, at any rate, upon the face of the exemplification as it stands in these two verses in question, is a posture of the body, of the human body. But a posture,—that of standing—what is it? It is the result of the position or *situation* of the *situs* of the several parts of the body in question with reference to each other.

Here, then, is a predicament, *situs*, which is but a modification of, and has, accordingly, already been brought to view by and under a former predicament, *ubi*.

8. Two other incongruities are, moreover, here observable.—

1. In the first place, in company and on a level with the eight other names of predicaments, which names are all of them, as it was fit they should be, so many *names of objects*,—nouns substantives, come a pair of adverbs, viz. *ubi*, where, and *quando*, when.

2. In the next place comes an instance of disorder. Between the two words here employed to designate place, viz. *ubi* and *situs*, comes the word *quando*, employed to designate *time*.

10. *Habitus*, vesture, human clothing, for such is the intimation given by the corresponding portion of the illustrative distich, *nec tunicatus ero*.*

But clothing, human clothing, is it not a substance? Here, then, we have given, in the character of the name of a predicament distinct from all the rest, an article included under one of them, viz. the first.

Clothing, a predicament distinct from substance? On equal ground might additional predicaments, in any number, be stated as having existence, as being entitled to a place upon the list, many of them, perhaps most, a better title.

A curious predicament, a predicament, the exemplification of which is mere matter of contingency, a predicament which, at *one* time, had no existence, which in one place *has*, in another place *has not*, existence at this present time.

Before eating of the fatal apple, neither Adam, nor Eve his wife, had any clothing,—had possession, or so much as any idea of any such predicament. In fact, it had not any

* The eighth category of Aristotle, corresponding with the tenth of Sanderson, (ἔχειν,) is generally translated *habere*, or possession; περὶ τοῦ ἔχειν is likewise the title of the twelfth chapter of the categories, criticised in the following page in its position among the Post-Predicaments.—*Ed.*

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exemplification or any existence. At the very instant of its being placed, the first fig leaf that was ever placed, gave birth to this predicament, gave birth to the first individual from which the species, such as it is, pregnant with all the individuals that ever belonged to it, took its rise.

Section II.

Of Aristotle's Post-Predicaments.

Taken together, Aristotle's Ten Predicaments were to include everything whatsoever. Yet, after this list of predicaments, comes presently a list of five other articles under the name of Post-Predicaments.

These five, how come they to be separated from the ten? For the designation of them, how happened it that a separate and different plan has been adopted?

Look at them and you will see out of the five, one, viz. the last employed, to signify a mixture altogether incongruous, the other four present as good a title as any of the original ten to admittance into the learned language.

Motion, though in this appendixious list, it occupies a place no earlier than the fourth out of the five, has not merely as good a title to a place upon the principal list, as one of those original ones, which are the only ones to whom a share in this general appellative is allowed, but, as will be seen below, a better title to be there.

1. *Oppositio*, opposition. This is manifestly a species of relation.

Of opposition, the Aristotelians distinguish four different modes.

2. *Prioritas*, priority. This, again, is another species of relation.

3. *Simultas*, simultaneity;—another relation, viz. that which takes place between two objects which, with reference to each other, are contemporary, *i. e.* exist in or during the same point or length of time.

4. *Motus*, motion. In the field of thought and action, this is an object of the most important and most extensive use.

Of all the ten Predicaments there is not one, *substantia* excepted, whose title to a place upon the list seems so uncontrovertible as that of this article. It is, as well as *substance*, matter, body, among the objects of which *quantity* and *quality* are predicable. Like substance it ought to have preceded these predicaments.

Actio, action, the fifth of the predicaments is but a species of motion related to motion as a species to its superordinate.

For its non-admittance into the list of predicaments what possible reason can have presented itself?

5. Fifth and last of these Post-Predicaments, *Habere*, in English—To have.

The discourse has, at this period, fallen off into nonsense, or something very near of kin to it. In the instance of the Ten Predicaments; in the instance of the four first of these Post-Predicaments, determinate ideas, and not mere words, were brought to view. A word is now introduced in the character of the name of a Post-Predicament, and to the word no determinate idea is attached. In the way of specification, what is given is not the modification of an idea, but a multitude or number of significations or senses in which it has happened to this same word to have been employed. Eight in number are these specifications;—eight, according to a statement in a succeeding chapter, is the number of these its different significations. Two, and no more, were the different significations included in the Predicament termed *habitus*, habit. These two form two out of the eight significations ascribed to *habere*, to have, this last of the Post-Predicaments.

CHAPTER V.*

MODES OF DISCUSSION.

Section I.

Aristotelian and Socratic Modes—their Difference.

To inform, to be informed, to persuade, to expose to aversion or contempt, under one or other of these heads may be comprised, it is supposed, the supposed good, the advantage, whatever it be, which, in the character of an object or end in view, a man can have on the occasion of his spontaneously joining in discourse.

In so far as to inform or be informed is the whole of the object in view, the seat of what passes is in the understanding,—in so far as persuasion or exposure are in view, it is in the affections;—the affections, which, when excited to a considerable degree of intensity, are termed the passions.†

Great are the eulogiums that have been passed upon the mode of disputation that bears the name of Socrates, compared with that of Aristotle.—What is the real merit, *i. e.* the real use of it?

Thus much all possible modes of argumentation, consequently these, among the rest, have in common, viz. from some proposition to which assent is given on both sides, an endeavour on the part of the comparatively active collocutor to draw from the comparatively passive collocutor an assent to a proposition, to which the assent of the active collocutor has already been attached, but to which the assent of the passive collocutor has not been, or, at least, is not by the active collocutor

* The fragmentary sections which have been brought together in this chapter, were probably intended to be incorporated with the Dialectic portion of the work, see above, p. 218.—*Ed.*

† See Table of springs of action, vol. i. p. 195.

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supposed to be as yet attached :—whether it be that the mind of the passive collocutor has not as yet taken its side, or that having taken its side, the side it has taken is the opposite side, attaching its dissent to the side to which the mind of the active collocutor has attached its assent,—its assent to that to which the mind of the active collocutor has attached its dissent.

In any form of argumentation this sort of opposition is, if not in actuality, at least, in probability, an essential feature,—from first to last, the existence of it is in contemplation, —from first to last, on the part of the active collocutor, the object and design of his discourse is, to exclude it, and if not, to drive it out, to prevent it from taking place.

For the production of this effect what are the means employed!—what are the means which the nature of the case furnishes! This will presently be visible.

On the part of the passive collocutor, the state of his mind with reference to that of the active collocutor, is, as far as can be collected from his discourse, either *negative* or *neutral*; for simplicity sake, suppose it, according to the customary supposition, *negative*. In this case the discourse, the discussion, is termed a controversy, a debate.

The debate is carried on either with or without the privity of a third person or third persons. According to the customary supposition, it is carried on, not only with the privity, but in the presence of, third persons in an indefinite number.

Of the forms employed by the Aristotelians in their disputations, the function or immediate object is, to designate the several propositions which it is proposed to exhibit to the *other interlocutor*, say the *adversary*, for the purpose of his attaching to them successively and respectively the sign of his assent or dissent, of his concession or negation.

The denomination given to the proposition for the purpose of the argument, is one by which the sort of relation which it bears, or is designed to bear, to the other propositions with which it is accompanied and connected, is indicated, or intended to be indicated.

When, in consequence, or in the course of debate, one of the two collocutors passes over to the opinion of the other, a sort of superiority is, by such transition, ascribed to the one with reference to and at the charge of the other ;—ascribed to the one whose declared opinion remains fixed, at the charge of him in the state of whose opinion a change has been produced,—a sort of superiority, viz. in the scale of wisdom, or knowledge, or intelligence ;—on the part of the superior, the existence of power—a source of enjoyment—is testified to exist : on the part of the inferior, weakness—a source of suffering.

In regard to *power*,—not only is *power* itself a source of enjoyment, but so likewise is the *reputation of* it, *i. e.* the state and condition of him who is reputed to possess it. So, on the other hand, in regard to *weakness*, not only is weakness itself a source of suffering, but so likewise, is the reputation of it.

When *reputation* is mentioned simply, *i. e.* without addition, it is understood to be reputation of something desirable, of something of which the tendency is to produce enjoyment to him who possesses it. When a debate takes place (a contest for superiority—for the reputation of superiority—a contest, whether avowed or not, not the less real) the side on which the superiority is understood to take place is the side of that one of the collocutors, to which side the other passes. The side on which the inferiority is understood to take place is the side of him, who, from his own side, passes over to the opposite one.

From this source any more than from any other, a man will not subject or expose himself to suffering in any shape but for the avoidance of some apparently greater suffering, or for the obtainment of some apparently more than equivalent enjoyment.

Rather than, as above, acknowledge inferiority, he would continue uttering discourse to any effect, or, if that would serve the purpose, have recourse to silence.

But by silence no such purpose can, on such an occasion, be served. On the contrary, the opposite effect is produced. It is only by action that superiority can be displayed or exercised ;—by inaction, whether in the shape of silence or in any other, on any occasion on which action is necessary to the display of superiority, nothing but inferiority and weakness is displayed.

Remains in, and for the sole refuge, discourse. But what discourse! Discourse by which, in the debate in question, the reputation of superiority is capable of being obtained, —discourse by which the reputation—the imputation of inferiority, is capable of being avoided, is, by the supposition, not to be found. But all discourse not conducive to that desirable end is either *irrelevant*, i. e. unimportant or erroneous. Now, it is only by such discourse as is, at the same time, pertinent and *correct*, that, on the occasion of a debate, the imputation of weakness can be avoided.

In proportion, as in case of irrelevancy, the irrelevancy,—in the case of erroneousness, the erroneousness, is manifest and glaring, *absurdity* is the quality universally ascribed to the discourse,—absurdity is the character ascribed to the mind of him by whom it is uttered.

Of debate, in whatever form carried on, what, then, is the object of him, the course taken by him, by whom an active part is taken in it! *Answer:* So to shape his discourse, that, on return to it, the adversary shall, for the avoidance of a still more afflictive humiliation, submit to the humiliation of coming over to his side. But such will be the effect, if, in return to the discourse, whatever it be,

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which is uttered by the more active of the two debaters, the discourse uttered by the other is of such a nature as to be, in the eyes of all competent judges, either palpably irrelevant or palpably erroneous.

A case in which irrelevancy is carried to as high a pitch as possible, is that of nonsensicalness; for discourse which has, or propositions that have, not any meaning at all, cannot, with reference to any discourse that has a meaning, be relevant.

What does the Socratic method of disputation?

The Socratic method employs not any such determinate mode and figure as that which is employed by the Aristotelian, nor, in a word, any mode or figure, except in so far as the use of a modification of what the Grammarians call the imperative mood may be styled, as it is by the Rhetoricians, a figure.*

In the Aristotelian method the person by whom is borne the principal part in the debate advances himself the propositions that are brought forward.

Now, then, as to the difference between the Aristotelian method of disputation or debate and the Socratic.

What does the Aristotelian?

Answer: In bringing up his arguments, the object and endeavour of the active collocutor is, previously so to frame and marshal them, that, at the issue, the adversary shall not be able to express his dissent from the proposition, or string of propositions, advanced by him without advancing a proposition palpably erroneous or irrelevant.

In this view all the propositions which, for the reduction of the adversary to this unwelcome dilemma can be necessary are so framed, that while without error, as supposed dissent cannot in relation to the last link in the chain be expressed, without absurdity the expression either of dissent or assent (in which last case the proselytism is acknowledged) cannot be refused.†

Section II.

The Disputative Branch of Aristotle's Logic,—in what respects it failed.

In respect of miscarriage and success, the character and lot of the art of logic, as taught by Aristotle, may be considered as a sort of prototype of the art of alchemy, as taught by the searchers after the universal medicine, the universal solvent, and the philosopher's stone. In both instances, in respect of the ultimate object, a complete failure was the result; but, in both instances, in the course, and in consequence, of the inquiry, particular discoveries of no small use and importance were brought to light.

Of the art of logic, according to the profession made by the Aristotelians, the professed object was, the communication, in which was necessarily implied the attainment of knowledge, correct and complete knowledge; a perfect acquaintance with relation to everything knowable by human faculties; knowledge, and that not slight, superficial, and imperfect, but correct and complete, viz. such as it was in the nature of the instrument called *demonstration* to produce.

So much for profession; now for the result. For about two thousand years, little more or less, the precepts of this art have been before us; and the result is, that, of the whole amount of things knowable, there is not a single one concerning which the smallest particle of knowledge has been found obtainable by means of it.

On the contrary, the nature of it is now, or may now, be seen to be such, that, by means of it, of no one thing can any sort or degree of knowledge, at any time, by any possibility, be obtained.

Experience, Observation, Experiment, Reflection, or the results of each and of all together; these are the means, these are the instruments by which knowledge, such as is within the power of man, is picked up, put together, and treasured up, and of no one of these, in the whole mass of the Aristotelian logic, is so much as a syllable to be found.

The *import of words*,—in this short expression will, in truth, be found the subject, the only subject of it; in such or such a manner, the import of this or that word agrees or disagrees with the import of this or that other.

On this occasion—a notion, and that an erroneous one—a proposition, and that a false one—was all along involved: this is, that to each word was an import naturally inherent, that the connexion between the sign and the thing signified, was altogether the work of nature.

What is now pretty generally, and at the same time, pretty clearly, understood, is, that the connexion between a word and its import is altogether arbitrary, the result of tacit convention and long-continued usage; and, of the truth of this proposition, the short proof is the infinite diversity of languages,—the infinite multitude of signs by which, in the different languages, the same object has been found represented.

The case is, that so firmly connected by habit are the connexions between these signs, and the things which they have respectively been employed to signify and present to the mind, that, in Aristotle's time, men had not learned sufficiently to distinguish them from one another; and of this inability, one consequence, and thereby one proof, was their aptitude, as often as they observed a word which, in its grammatical form, purported to be the name of a thing, (that form being the form that had been given to such words as were

* Viz., Erotisis.

† The MSS. end here with a note by the author: "Go on explaining the mechanism."—*Ed.*

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really, and in truth respectively, the names of things,) to infer the existence of a particular sort of real thing corresponding to that word, the observation not having been as yet made that the purposes of human converse could not, in any instance, have been attained, unless to such words as are names of real entities, a mixture, and that a large one, had been added of words which are but so many names of so many purely fictitious entities.

Section III.

Of useful Instruction how much, and what has been obtained and obtainable from it?

Thus completely (it has been seen) has the disputative branch of this art, that which was regarded as the main and crowning branch, failed in the accomplishment of its promise.

But (besides that as hath been observed in and by the precedent and supposed subservient branches of the same system of instruction,—many, and very useful, helps to instruction, helps to the human mind in its labours in the field of art and science, and even in that of ordinary discourse and converse were afforded) —so it is, that neither has this part of the system, notwithstanding the completeness of its failure, so far as concerns its principal object, been altogether without its use.

Of this use, the following description may, perhaps, serve to convey a general, though antecedently to explanation, not, perhaps, a very determinate idea.

The use of the Aristotelian logic consists in the furnishing to discourse a certain form, whereby, if any two parties agree in the employment of it, it will, in relation to any topic of discourse at pleasure, all along be seen in what, if in any, particulars they agree, and in what, if in any, they disagree.

It operates, to borrow an image from Chemistry, as a sort of menstruum or agent, whereby the portion of discourse placed in it is decomposed, and that part, if any, in which they agree, is lodged in one place, that part, if any, in which they disagree in another place: such of this instrument has been found the effect.

Such as above, and in so far as the instrument has been employed, has been found to be the effect; but the means, the means by which this effect has been produced, what it may naturally be asked have they been?

The answer appears to be twofold.

1. This form being a received and acknowledged test of truth, shame keeps men of sense from refusing to subject their discourse to it.

2. It cannot serve but in proportion as the same ideas have been generally annexed to the same signs, but in so far as this, notorious shame keeps men from denying and questioning it.

CHAPTER VI.

RELATION OF LOGIC TO THE BUSINESS OF HUMAN LIFE IN GENERAL, AND THEREIN TO ARTS AND SCIENCES, *i. e.* TO DISCIPLINES.

Section I.

Distinction between Disciplines and Occupations at large, its indeterminateness. Disciplines are Arts or Sciences—Distinction between Art *and Science, its indeterminateness.*

By what is it that the exercise of arts, and the acquisition of sciences, are distinguished from occupations at large? By what is it that the field of art, and that of science, are distinguished from each other.

On these several topics, clear conceptions must be formed and entertained, or the view taken of the field of thought and action, on the one hand, and the relation borne to it by the art of logic, on the other hand, will be unsteady and confused.

On these several topics, clear conceptions must be formed and entertained, or it cannot be understood what an *art* is, what a science is.

On these several topics clear conceptions must be formed and entertained, or it cannot be understood what is the proper matter for a work bearing the name of an Encyclopedia; where its subject begins, and where it ends.

As often as the words *arts and sciences* are pronounced, a natural, and, it is believed, a very general, not to say universal, supposition is—that, in the first place, arts and sciences taken together, are different and distinguishable from whatever is neither art nor science; in the next place, that art and science are no less clearly different and distinguishable from each other.

A supposition to this effect, how could it fail either to have been found, or to have been generally entertained? Wheresoever a difference in *name* presents itself to view, a correspondent difference in *nature* is, of course, inferred. What can be more *natural* than such an inference, and, in general, more reasonable than such an inference? The marking of correspondent differences in *nature* is the very purpose for which differences in *nomenclature* were invented and established.

Thus much is, indeed, undeniable. Unfortunately, besides that, while distinctions in *name*, without correspondent differences in *nature*, are not without example, an inconvenience much more frequently exemplified is, that of the classes or aggregates, for the designation of which these names are employed, the limits are far from being determinate.

As yet, throughout the whole field of language, which is as much as to say, throughout the whole field of thought and action, imperfections such as these are to be found in but too great abundance; little by little, from industry, guided by discernment, they may

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however expect a cure. In so far as conceptions are already distinct, apt denominations will find the public mind already disposed and prepared to receive and employ them at the first word, and thus the imperfection will be remedied before the existence of it has been so much as noticed. But, where conceptions are still confused and discordant, the imperfections may still be capable of receiving a remedy at the hands of individual industry, but before men can be induced to receive and make use of the remedy, it will, in general, be necessary that the existence of the imperfection, with its attendant inconveniences, should first be held up to view.

The plain truth of the matter seems to be this,—between the field of art and science, and the remainder of the field of thought and action, there exists not any assignable difference; correspondent to these denominations, what there exists in the case, is a difference in the state of the mind of those by whom the part in question, of that field, is cultivated; where the nature of the case requires an operation to be performed, and of that operation the performance is regarded as requiring *study*, i. e. a certain degree of attention and a certain degree of labour, employed in fixing it; then it is, that in speaking of the operation done, the word *science*, or the word *art*, or both together, are employed.

In so far as, whether with or without, a view to further action, so it is that, in the receipt and collection of the ideas belonging to the subject, perceptible labour is employed, then it is that the word science is employed, and such portion, whatever it be, of the field of thought and action to which the labour is applied, is considered as a portion of the field of science. In so far as a determinate object, in the character of an *end*, being in view, operation in the particular direction, is recurred to for the attainment of that end,—that portion, be it what it may, of the field of thought and action to which the labour is applied, is considered as part and parcel of the field of art.

Section II.

Of the Business of human Life in General; and hence of Arts, Sciences, and Disciplines.

An occupation, the performance of which is considered as not requiring study:—An occupation, the performance of which is considered as requiring study; *i. e.* a course of labour, viz. mental alone, or mental and bodily together, in the endeavour to perform it in a manner conducive to the *end in view*; under one or other of these descriptions may every sort of occupation, which was, is, or ever can be exercised by any human being, be comprised.

Occupations of the studious kind, consisting in the acquiring, or endeavouring to acquire, what is called *knowledge*; i. e. the obtaining correct conceptions and judgments in relation to the subject in question, but without action in any shape, except that which is exerted or employed in the attainment of those conceptions, and the formations of those judgments, may be called speculative.

The acquisition of science is the result or object of occupations of the speculative class; in the exercise of occupations, which consist in the performance of some operation, consists the exercise of art.

To the number of the Disciplines—the arts and sciences taken together—the nature of the case admits not of any fixed limit.

At any given period, suppose the actual number of them to be what it may; for adding to that number, the nature of things will always furnish two courses. One is logical decomposition, taking in hand any discipline that at present has a name, considering the name of it as a generic name, and giving a particular name to some species, now for the first time distinguished from all other species contained under that generic name, and now for the first time fitted out with a particular name for itself; the other is taking out of the waste field of ordinary and undenominated practice, a mode of operation, and transplanting it into the enclosed and cultivated field of disciplines, of arts and sciences.

Of things capable of being *known*, there is not anything that may not be considered as the subject of *a science*.

Of things capable of being *done*, there is not anything that may not be considered as the subject or object of *an art*.

Among things capable of being known, between such as are considered as subjects of science, and any which are considered as not being subjects of science, the only distinction that can be assigned is this,—viz. that in the one case the thing is supposed to be capable of being known without effort, exertion, study; in the other case not:—effort, viz. either when it is considered in and by itself, or when it is considered in respect of some relation to other things, without the knowledge of which relation it is regarded as not being, properly speaking, capable of being known,—the relation being such as is considered as not being capable of being known without effort.

But by this account of it, every such distinction, it is seen, cannot but be an indeterminate one. Efforts vary in degree down to 0; and on the occasion of the knowledge of that object, to the knowledge of which effort is, in the instance of this or that individual, necessary; in the instance of this or that other individual, no perceptible effort will be necessary.

In so far as among an assemblage of things there exists such a relation as has the effect of causing such assemblage to be considered as constituting a whole; if, in so far as in the case of the class of men in question, that whole be of such a nature, as that the knowledge of that whole, or any considerable por-

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tion of it is considered as requiring a considerable degree of effort for the obtaining of it, this whole will naturally be considered as constituting the object of a science.

And so in the case of anything which, by a man, has occasion to be done.

To a considerable extent, different assemblages of these *noscenda* and *facienda*; of these subjects or objects of *disciplines*, have received names,—separate and specific names. And in some of these instances, the *discipline* has been commonly spoken of and considered as a science; in others as an art.

Where the effort, considered as necessary to the knowing what is to be known, is considered as greater than the effort considered necessary to the knowing what is to be done, the discipline has been put upon the list of sciences; in the opposite case, upon the list of arts.

The use of these observations is to obviate perplexing doubts, and useless and interminable disputations; doubts and disputes, the effect of which is, so far and so long as they have place, to keep involved in clouds the whole field of intellection, including not only the whole field of art and science, but the whole field of ordinary life and conversation.

The several disciplines, being each of them a means of happiness or well-being, considered with relation to mankind taken in the aggregate, the thing to be desired with a view to their happiness, is, that the quantity of *disciplines* should at all times be as great as possible. Say for shortness,—subservient to the maximum of *happiness*, is the maximum of *disciplines*.

But each portion of discipline, requiring for the acquisition of it a corresponding portion of time, and various disciplines being of such a nature, that the acquisition of them requires, in the character of a condition precedent, and *sine quâ non*, the possession of a particular *situation in life*; such, that the number of those within whose reach the faculty of occupying it is comparatively inconsiderable; hence it is, that to no one individual is the possession of this maximum of disciplines at any point of time possible.

Section III.

Relation to well-being, the most instructive Bond of Connexion to all Arts and Sciences.

Logic, say the Aristotelians, is the art by which the mind of man is conducted to the tabernacle of knowledge. Let us now add,—in its road to the temple of happiness.

In this route, then, happiness is the *polar star* by which our steps will be guided—the *test* to which the several portions of knowledge will be subjected—the *standard* by which their value will be tried.

By the relation which the respective disciplines bear to happiness, the relation they bear to each other will be indicated and brought to view;* and in this manner a new mode of training will be applied to the celebrated Encyclopedical tree, cultivated with so much ingenuity and success by Bacon and D'Alembert.

Handmaid, or rather governess, to each individual art and science, Logic beholds, comprehended within her all comprehensive domain, the particular domain of each.

Section IV.

Application of Logic to advancement in the other branches of Art and Science.

By one single memento, as much may be done towards advancement in all the several branches of art and science, as by everything put together that can follow it.

On the occasion of every art and science, place before you continually the use or uses capable of being made of it, always with reference to happiness, in so far as capable of being influenced by it. For shortness, say, *Look out for the end in view.* More shortly still, and for strengthening the impression, borrowing an ancient and foreign language—*Aspice finem.*

Only by attention to the end—only in so far as attention is paid to the end, can improvement, in any shape, be made. Only with reference to use, understand always to the augmentation of happiness, in some shape or other, has knowledge, how consummate soever, any claim to attention;—only by its subserviency to practice, has knowledge any use,—only by its subserviency to art, is science in any shape of any use.

By science, we mean knowledge considered in respect of the attention employed in, or requisite to, the attainment of it.

Such being the course recommended with a view to advancement (whether in respect of the mode of learning and teaching the art and science in its present state, or by giving extension to the quantity of knowledge possessed, and the success with which the art is practised at present,)—of this memento, what is the use and need?—whence does it arise? Answer, it arises from the fact,—that the course commonly pursued is a different one. It consists in proceeding in the track in which others have proceeded: eyes directed constantly to the investigation of that track: never turned directly to the end in view.

Blind imitation track,—goose track,—sheep track;—geese follow the first that starts—sheep follow the bell-wether.

The track that presents itself as leading to the end in view, is the track pointed out by reason,—the track that others have travelled in, or are supposed to have travelled in, is the track pointed out by custom.

Changing the metaphor,—let reason be fruitful, custom barren. So preached Bacon, but hitherto with comparatively small effect—with

* See Chrestomathia, Table V., supra, p. 82 *et seq.*

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small effect in comparison with what the reasonableness of the instruction upon the face of it would lead us to expect. To preserve the image, the fruitfulness of reason, has been that of the *Foumart*,—of custom that of a *Dos-rabbit*.

So little frequented is this only reasonable course, that whoso, in the study of any science, or practice of the corresponding art, is seen to pursue, or suspected to pursue it, is in such sort, and to such a degree thereby distinguished from the general run of the cultivators of that same art and science, as to be regarded as standing alone, and affecting singularity; and as such, becomes the object of a mixture of contempt and jealousy and envy:—of contempt, in so far as this practice of his is regarded as indicative of folly,—of jealousy, in so far as his success, and thereby his chance of superiority with reference to the person thus occupied in making observation of him, is an object of apprehension,—of envy, in so far as it is a subject matter of conviction and belief. *Innovation* is the word, by the use and application of which, expression is given to the sentiment of displeasure towards the person in speaking of the practice. Of the practice, and by reason of it, the practiser, it is made known that they are sources and objects of a sentiment of displeasure in the breast of the person by whom the word innovation is thus applied.

CHAPTER VII.

CLEARNESS IN DISCOURSE, HOW TO PRODUCE IT! AND HENCE OF EXPOSITION.

SECTION I.

Seats of unclearness,—the Words or their connexion,—Exposition what?

A sentence, in the grammatical sense of the word sentence, consists either of a *single proposition*, in the logical sense of the word proposition, or of a number of such propositions; if of one only, it may be termed a *simple* sentence,—if of more than one, a *compound* sentence.

A proposition is *clear*, in proportion as it is *clear*—that is, *free*—at the same time from *ambiguity* and obscurity.

Clearness is, on every occasion, relative;—relation being had to the person considered in the character of hearer or reader.

There exists not, nor ever will exist, any proposition that is perfectly clear to every hearer and reader. There exist but too many that neither will be, nor ever have been to any one;—not so much as to those by whom they were respectively framed.

Instances are not, however, uncommon where ideas, which in the mind of him, by whom the discourse meant for the communication of them, was uttered, were perfectly clear, are expressed in such a manner as not to be clear to any one else. Clear in the conception—clear in the expression—clear in neither,—clear in the conception alone, not in the expression; if in the conception a set of ideas were not clear, it is not natural that they should be clear in the expression, yet by accident it may happen to them so to be.

Where *unclearness* (why not unclearness as well as uncleanness) has place in a discourse, the seat of it will be either in the *words* or in the *syntax*:—in some one word, or number of words, each taken singly, *i. e.* without regard to the mode of their connexion, or in that mode itself; in the state of their mutual relations with reference to the import of each other.

In so far as the seat of the unclearness is in the words taken singly,—*clearness* has for its *instrument*, *exposition*. Exposition is a name which may, with propriety, be applied to the designation of every operation which has for its object, or end in view, the exclusion or expulsion of unclearness in any shape;—to the operation, and thereby (for such, on the present occasion, is the poverty, and thence the ambiguity of language) to the portion of discourse by which the end is endeavoured to be accomplished, and by which the operation of accomplishing it is considered as performed.

SECTION II.

Subjects to which Exposition is applicable.

Be the exposition itself what it may, a *subject* it cannot but have;—a subject to which it is applicable.

This subject,—what may it be? What are the diversifications of which it is susceptible? Questions to which, in the first place, an answer must be provided. Why? because, on the nature of the subject will depend the nature of the mode of exposition of which it is susceptible.

In relation to the subject of this instrument of clearness, two observations require to be brought to view in the first place.

1. The subject of exposition, viz., the immediate, and only immediate, subject, is, in every case, a *word*.

2. That word is, in every case, *a name*: i.e. a word considered in the character of a name.

Exposition supposes *thought*.—A word is a *sign of thought*. How imperfectly soever,—in a manner how deficient soever in respect of *clearness*,—*thought*, it is true, may be expressed by *signs other* than words,—by inarticulate sounds,—by gestures,—by deportment. But as often as any object has been considered in the character of a subject, of or for exposition, that object has been a word;*—the immediate

* On this subject, for the purpose of exposition, *i. e.* for the purpose of ensuring clearness, the Aristotelians have given us a distinction which may be seen to be itself a source of unclearness,—viz. of that sort which is termed obscurity. For the purpose of exposition, one of the instruments or operations they employ is *definition*, to which again

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subject of exposition has been a word:—whatsoever else may have been brought to view, the signification of *a word*—of the word in question, has been brought to view:—the word is not only a subject, but the only physically sensible subject, upon and in relation to which the *operation* called exposition has been performed.

Of the two cases which follow, for the purpose of this inquiry, convenience seems to require that the first place should be allotted to the case where the exposition takes for its subject, an object proposed to be expounded, as well as the word with the assistance of which, in the character of its sign, the object is proposed to be expounded;—the second place to the case, where, without reference to any particular object or class of objects, the exposition takes for its subject a word considered in the character of a sign, which, for the designation of some object, or class of objects, is wont to be employed.

Section III.

Mode of Exposition where the Thing which is the Subject is an Individual—Individuation—Individual and Generic.

Thus much being premised, the word in question is either the name of an *individual* object, or the name of a *species* or sort of objects.

If it be the name of an individual object, *individuation* is the general name by which the only mode of *exposition*, of which (regard being had at the same time to the subject) the name of an individual object is susceptible.

Individual individualization, or say, *individuation*,—*generic*, or *specific individuation*,—by these two denominations may be distinguished two modes of individuation, which, for practical purposes, may require to be distinguished.

Individual individuation is, where, in relation to an individual object, an indication is endeavoured to be given, whereby, or by the help of which, an individual object may be distinguished from any or all other individual obects wherewith it is regarded as being liable to be confounded.

Take, for instance, on the surface of the earth, the designation of the several distinguishable portions which it contains; and into which, physically or psychically speaking, it is capable of being divided. In so far as the portion in question is considered as relatively large, geography is the portion of art and science, to which, with the help of astronomy, the individuation of the object is considered as appertaining:—Topography, in so far as it is considered as relatively small. From geography will be sought, on the surface of the terraqueous globe, the portion distinguished by the name of Europe; from geography, again, in Europe, England,—in England, London, and Westminster; [from topography] in London and Westminster, Queen's Square Westminster, and Queen's Square Place.

Generic, or Specific Individuation.—By this appellative may be distinguished the operation which has place in the case where, regard being had to a genus of objects, as distinguished by a generic name, instructions are given, having for their object the causing men to be agreed in determining within what limits or bounds an individual, when designated by and under that name, shall be considered as limited, so as to be distinguished from all objects which are regarded as liable to be confounded with it,—or in relation to any individual aggregate, likely to be considered as designated by that name, of what elements that aggregate shall be considered as composed.

The field of *law* is the field in which the demand for this mode of individuation, for this mode of exposition, is most copious and most urgent, and the use of it most conspicuous and incontestable.

In the individuation of moveable physical objects, the instruments are conjunct portions of time and space.—*Axiom.* No two portions of matter can exist at the same portion of time in the same portion of space.

Section IV.

Mode of Exposition where the Teacher and Learner have no common Language.

1. *Representation.*—If all words were significative of real entities, and if these were all objects which might at all times be brought within the reach of the perception both of the learner and the teacher, exposition would be easy and consist in the pointing to the object in question, and pronouncing at the same time the word which it is wished to attach to it as its name. This is exposition by signs, and may be termed *representation.* Among persons who have no common language by which they can communicate their ideas, this is at first the only practicable method, and we see it continually exemplified when a child is taught to speak, or a foreigner who understands no words with which we are acquainted, or who cannot make use of dictionaries or any other written explanations of our words, is instructed in our language.

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they apply another instrument, viz. *division.* A definition (say they) is either a definition of the *name*, or a definition of the *thing*, meaning, evidently, of the thing—of the object, of which the word is employed as a name. Now, in the account thus given of the matter, a proposition is implied which is not true; viz. that where the definition is a definition of a thing, it never is the definition of the name; whereas in truth it always is.

Of the distinction which they had in view, the form they should have employed seems to be this: a definition is either a definition of the word alone, or a definition of the thing by means of the word. A definition of the thing signified,—meant to be expressed by it.

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Next to these names of real entities, perceptible and present, those which are the most readily expounded by representation, are names of collective fictitious entities. By representing successively a number of objects comprehended in the collective fictitious entities, —book, plant, &c., we may easily succeed in attaching to those words in the learner's mind, a general idea of the sense we attach to them, and which, though at first very vague and imperfect, will, at any rate, serve as the groundwork of the discourse by which a clearer and more correct exposition may subsequently be given.

A generic idea once formed, the meaning of words indicative of specific differences, may be deduced from it; still, by mere representation, not perhaps the *substantive names* of that class of fictitious entities, called *relations*, but those abbreviate words called *adjectives*, which designate at once the relation or property, and the fact of its being attributed to the object represented. A *great book*, a *little book*, a *yellow flower*, a *red flower*, &c., may be thus expounded, whilst the explanation of the words *greatness* and *smallness*, *colour*, &c., may require one or other of the species of discourse which are comprehended among the other modes of exposition.

As yet, however, we have but *substantives* and *adjectives*, and without *verbs*, no discourse can be held,—no farther exposition given, and consequently, no clear ideas communicated: we must again have recourse to representation, but in a manner far more complicated. Taking verbs expressive of operations as the most simple, it will be necessary to repeat the operation in question, within the reach of the senses of the learner, a number of times more or less considerable, according to his intellectual powers, before we can have any security for his attaching to the word the idea we wish to convey.

Thus, by taking successively a variety of things, and alternately putting them in motion, and pointing to them, whilst at rest, and pronouncing on each occasion either the words *I move*, (naming the thing whatever it may be,) or the name of the thing with the words *at rest*, the constant repetition of the same word will soon cause the mind of the learner to attach to it the idea required. A phenomenon, which appears to depend particularly on that passive property of the mind, which may be designated by the name of *habit*. It is evident, however, that great mistakes may frequently occur in the learner's mind in these cases,—if, for instance, all the things represented as being in *motion* happen to *be red*, and all these which are spoken of as being *at rest* are *white*, he may just as well attach to the words *I move*, the meaning *red*, and to these *at rest*, the meaning *white*, as the signification intended to be conveyed.

The exposition by representation of the substantive verbs *to be* and *to have*, and of prepositions and other expletives necessary in the composition of discourse, must then be undertaken. But it will, in most cases, be still more complicated, and consequently, still more liable to misconception. As soon, however, as any tolerable degree of certainty is obtained of the having conveyed a sufficiently adequate idea of the signification of these several classes of words, extensive enough to form a connected discourse, a more exact exposition may then be undertaken in that one of the other modes which may be found most suited to the object in question.

Section V.

Modes of Exposition, by Comparison with Words, intelligible to both Teacher and Learner.

The two modes comprehended under this head are Translation and Etymologization.

1. *Translation.*—Exposition by translation is performed by mentioning a word already known to and understood by the learner, and by giving it as expressive of the same idea or image of the one represented by the word to be expounded. The proposition *man* is what you, a Spaniard, call *hombre*; *Oxide of hydrogen* is what you, in ordinary conversation, call *water*; are expositions by translation of the words *man* and *oxide of hydrogen*.

This operation supposes the ideas represented by the word in question to be equally well-known to both learner and teacher; and in that case only will this mode suffice. If the idea entertained by the learner with reference to the words *hombre* or *water* be not exactly the same as that of the teacher, (as will frequently be the case,) a further exposition is necessary by some other mode.

From the two examples given above, it may be inferred, that exposition by translation may be usefully employed for two distinct purposes: 1st, for teaching words in the same language more convenient for particular purposes, because they are those made use of by this author, or that practitioner, with whom it is the learner's interest to become conversant; or, 2dly, because the word is more convenient for use than the one the learner is already acquainted with.

Sets of words thus translated for the use of particular classes of learners, and arranged in an order convenient for reference, are compiled under the name of *Dictionaries of Languages*,* *Dictionaries of Technical Terms*, *Dictionaries of Synonyms*; and may furnish examples of the very extensive use of the mode of exposition. In the case of the two latter dictionaries, however, very few expositions are, by mere explanation, particularly in the case of synonyms, this name having been unfortun-

* *Dictionaries of languages*, that is, where the words of one language are expounded by giving the corresponding words of another. Dictionaries in a single language generally comprehend almost every species of exposition.

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ately given sometimes to words which have exactly the same meaning, sometimes to those which have *nearly* the same meaning, an inconvenience which I shall more fully expose under the head of synonymation.

In physical sciences, where the use of exact exposition has been so much felt of late, the word *synonym* has retained its correct signification, and the name of *synonomy* is given to a collection of results of translation, and may serve as an excellent example of this mode of exposition, applied to the second of its two above-mentioned purposes. A similar synonomy or translation of the leading words of many ethical, noological, or pathological works, would throw a singular light upon many subjects of controversy between authors hitherto irreconcileable.

2. *Etymologization.*—By etymologization I do not mean to indicate that long and uncertain investigation of the various changes and transformations of sense and sound which a word has undergone in the course of time,—that search after etymology which leads into so many blunders, and which, though sometimes productive of a certain degree of advantage to the study of some sciences, is more frequently of no other use than mere momentary amusement. The operation I have now in view is the exposition of *inflected words* and *conjugates* by the exhibition of the *root* from which they are derived.

The distinction between *inflection* and *conjugation* will be more fully given when we come to the analysis of language. In the meantime, for the understanding of the above definition, I shall only mention that I comprehend under the terms inflected words and conjugates all such words as are modified in part so as to change their signification, corresponding modifications being applicable, with the same effect, to a number of other words. The original words thus to be modified go under the name of roots. Thus from the root *rego* are derived the several inflected words and conjugates *rexi, rectum, regnans, regnum, interregnum, rex, regalis,* &c. &c.

In all cases where each inflection has a particular name, which, as well as the root, is equally well understood by both learner and teacher, exposition by etymologization will suffice, and should be preferred to any of the succeeding ones as being next in simplicity to translation. Thus the expression *rexi* is the first person singular, perfect tense, and indicative mood of the verb *rego*. *Children's* is the genitive case, plural number, of the substantive *child*—*Reader* is the name of the operator that relates to the operation to *read*—will immediately give a clear and correct idea of their meaning to one who understands already the names of the classes of inflection, *first person, plural number, perfect tense, indicative mood, genitive case, operator relating to an operation,* and of the roots *rego, child,* to *read.*

Whenever this is not the case, etymologization will not suffice; but even then, whenever an inflected word occurs, it is almost always more advantageous to reduce it to its root, to expound that root, and to explain the class to which the inflection belongs. As a general rule, we may say, that exposition by etymologization, as well as by translation, should be given, whenever the case admits of it, either alone or in conjunction with any of the other modes.

Section VI.

Modes of Exposition where the Subject is a Class.

1. Definition, meaning the sort of operation and correspondent work ordinarily understood by that name. 2. Operations and works incidentally employed as preliminary and preparatory to that of definition, say preparatory operations. 3. Operations incidentally employed as subsequential and supplementary to that of definition, say supplementary operations. 4. Operations which, in certain cases in which the purpose cannot be accomplished by definition—understand by definition in that same form, require to be performed in lieu of it,—say succedaneous operations. By one or other of these subordinate appellations may the operation of exposition, in every shape of which it is susceptible, it is believed, be designated.

To *define* a word is to give indication of some aggregate in which the object of which it is the sign is comprehended, together with an indication of some quality or property which is possessed by that same object, but is not possessed by any other object included in that same aggregate.

Elliptically, but more familiarly, to *define* a word is to *expound* it by indication of the genus and the difference—*per genus et differentiam,* say the Aristotelians.

In this account of the matter, two things, it may be observed, are, howsoever inexplicitly, assumed, viz. 1. That the object in question belongs to some nest of aggregates.* 2. That it is not itself the highest, the most capacious, the all-comprehending aggregate of the nest: in other terms, that the word is not of the number of those the import of which is not included in the import of any other of the words employed in giving names to aggregates; that it belongs to some nest of aggregates, and that it is not itself the most comprehensive and all-comprehensive aggregate of the nest.

The genus represented by a word which is the name of that aggregate, in which all the other aggregates of the nest to which it belongs are contained and included, has no genus which is superior to it; it is, therefore, in its nature incapable of receiving a definition; meaning always that mode of exposition which, in modern practice, seems to be universally understood by that name.†

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* See chap. ix. sec. viii.

† An excellent illustration of definition, in con-

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Meantime the class of words which are in this sense of the word incapable of receiving exposition in that shape are among those, in the instance of which the demand for exposition is the most imperious. For these then that mode of exposition is necessary to which, by the description of succedaneous modes of exposition, reference has just been made, and of which an account will presently be endeavoured to be rendered.*

Yet of these words which are all of them incapable of receiving a definition, in effect definitions are very generally, not to say universally wont to be given with a degree of unconcern and confidence, not inferior to that with which the operation is attended, when the subject upon which it is performed, is with the strictest propriety susceptible of operation in that mode.

Section VII.

Of Exposition by Paraphrasis, with its Subsidiary Operations, viz. Phraseoplerosis and Archetypation.

Bisection 1.

Explanation of these Modes of Exposition, and of the Case in which they are necessary.

Paraphrasis is that mode of exposition which is the only instructive mode, where the thing expressed being the name of a fictitious entity, has not any superior in the scale of logical subalternation.

Connected, and that necessarily, with paraphrasis, is an operation, for the designation of which the word Phraseoplerosis (*i. e.* the filling up of the phrase,) may be employed.

By the word paraphrasis may be designated that sort of exposition which may be afforded by transmuting into a proposition, having for its subject some real entity, a proposition which has not for its subject any other than a fictitious entity.

Nothing has no properties. A fictitious entity being, as this its name imports, being, by the very supposition, a mere nothing, cannot of itself have any properties: no proposition by which any property is ascribed to it can, therefore, be in itself, and of itself, a true one, nor, therefore, an instructive one. Whatsoever of truth is capable of belonging to it cannot belong to it in any other character than that of the representative—of the intended and supposed equivalent and adequate succedaneum, of some proposition having for its subject some real entity.

Of any such fictitious entity, or fictitious entities, the real entity with which the import of their respective appellatives is connected, and on the import of which their import depends, may be termed the real source, efficient cause, or connecting principle.

In every proposition by which a property or affection of any kind is ascribed to an entity of any kind, real or fictitious, three parts or members are necessarily either expressly or virtually included, viz. 1. A *subject* being the name of the real or *fictitious entity* in question.—2. A predicate by which is designated the property or affection attributed or ascribed to that subject; and 3. The *Copula*, or sign of the act of the mind, by which the attribution or ascription is performed.

By the sort of proposition here in question, viz., a proposition which has for its subject some fictitious entity, and for its predicate the name of an attribute attributed to that fictitious entity, some sort of image—the image of some real action or state of things, in every instance, is presented to the mind. This image may be termed the archetype, emblem, or archetypal image appertaining to the fictitious proposition, of which the name of the characteristic fictitious entity constitutes a part.

In so far as of this emblematic image indication is given, the act or operation by which such indication is given, may by termed Archetypation.

To a considerable extent Archetypation, *i. e.* the origin of the psychological, in some physical idea, is often, in a manner, lost;—its physical marks, being more or less obliterated by the frequency of its use on psychological ground, while it is little, if at all, in use on the original physical ground.

Such psychological expressions, of which, as above, the physical origin is lost, are the most commodious for psychological use. Why?—Because in proportion as it is put out of sight, two psychological expressions, derived from two disparate and incongruous physical sources, are capable of being conjoined without bringing the incongruity to view.

When the expression applied to a psychological purpose is one of which the physical origin remains still prominent and conspicuous, it presents itself to view in the character of a

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tradistinction to other modes of exposition, is afforded by the characteristic phrases of writers on the physical sciences, in which those characters alone are given which are *necessary* to distinguish the species from all others in the same genus; or, in other words, which *constitute* the species. All other properties, the knowledge of which may assist the learner in the formation of the idea he is intended to receive, being referred to *description* of which I shall speak farther on.

A great light would be thrown on the pneumatological branches of science, were the like exactness to be given to the definition of words in use, wherever definition may be employed with advantage. In the case of all terms of very general import, it will be found much more useful to consider them as genera generalissima, and expound them by other means, but when once the import of these genera is fixed, definition should be applied to, and persevered in to the greatest extent possible. The advantage of this will appear in a clearer light when I speak of methodization, an operation with which definition is intimately connected.

* See section viii.

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figurative expression—for instance a *metaphor*. Carried for any considerable length through its connexions and dependencies, the metaphor becomes an allegory—a figure of speech, the unsuitableness of which, to serious and instructive discourse, is generally recognised. But the great inconvenience is, that it is seldom that for any considerable length of time, if any, the physical idea can be moulded and adapted to the psychological purpose.

In the case of a fictitious proposition which, for the exposition of it, requires a paraphrasis, having for its subject a real entity, (which paraphrasis, when exhibited, performs, in relation to the name of the fictitious subject, the same sort of office which, for the name of a real entity, is performed by a definition of the ordinary stamp, viz. a definition *per genus et differentiam*)—the name forms but a part of the fictitious proposition for the explanation of which, the sort of proposition having for its subject a real entity, is in the character of a paraphrastically-expository proposition required. To compose and constitute such a proposition as shall be ripe and qualified for the receiving for itself, and thereby for its subject, an exposition by *paraphrasis*, the addition of other matter is required, viz., besides the name of the subject, the name of the predicate, together with some sign performing the office of the copula;—the operation by which this completion of the phrase is performed, may be termed Phraseoplerosis.

Phraseoplerosis is thus another of the operations connected with, and subservient to, the main or principal operation, paraphrasis.

Bisection 2.

Exemplification in the Case of the fictitious Entity Obligation.

For exposition and explanation of Paraphrasis, and of the other modes connected with it, and subsidiary to it, that which presents itself as the most instructive of all examples, which the nature of the case affords, is that which is afforded by the group of ethical fictitious entities, viz. *Obligations*, rights, and the other advantages dependent on obligation.

The fictitious entities which compose this group have all of them, for their real *source*, one and the same sort of real entity, viz. *sensation*, the word being taken in that sense in which it is significative not merely of perception, but of perception considered as productive of pain alone, of pleasure alone, or of both.

Pain (it is here to be observed) may have for its equivalent, loss of pleasure; pleasure, again, may have for its equivalent, exemption from pain.

An obligation (viz. the obligation of conducting himself in a certain manner,) is incumbent on a man, (*i. e.* is spoken of as incumbent on a man) in so far as, in the event of his failing to conduct himself in that manner, pain, or loss of pleasure, is considered as about to be experienced by him.*

In this example,—

1. The exponend, or say the word to be expounded, is *an obligation*.

2. It being the name not of a real, but only of a fictitious entity, and that fictitious entity not having any superior genus, it is considered as not susceptible of a definition in the ordinary shape, *per genus et differentiam*, but only of an exposition in the way of paraphrasis.

3. To fit it for receiving exposition in this shape, it is in the character of the subject of a proposition, by the help of the requisite compliments made up into a fictitious proposition. These compliments are, 1, the predicate, *incumbent on a man*; 2, the copula *is*; and of these, when thus added to the name of the subject, viz. *obligation*, the fictitious proposition which requires to be expounded by paraphrasis, viz. the proposition—*An obligation is incumbent on a man*, is composed.

4. Taking the name of the subject for the *basis*, by the addition of this predicate, *incumbent on a man*, and the copula *is*, the phrase is completed, the operation called *phraseoplerosis*, *i. e.* completion of the phrase is performed.

5. The source of the explanation thus given by paraphrasis, is the idea of eventual sensation, as expressed by the names of the different and opposite modes of sensation, viz. pain and pleasure, with their respective equivalents, and the designation of the event, on the happening of which such sensation is considered as being about to take place.

6. For the formation of the variety of fictitious propositions, of which the fictitious entity in question, viz. obligation, or an obligation, is in use to constitute the subject, the emblematical, or archetypal image, is that of a man lying down, with a heavy body pressing upon him, to wit, in such sort as either to prevent him from acting at all, or so ordering matters that if so it be that he does act, it cannot be in any other direction or manner than the direction or manner in question,—the direction or manner requisite.

The several distinguishable sources from any or all of which the pain and pleasure constitutive of the obligation in question, may be expected to be received, viz. the several sanctions, distinguished by the names of the physical sanction, the popular, or moral, sanction, the political (including the legal) sanction, and the religious sanction;—these particulars belong to another part of the field, and have received explanation in another place.†

To that other place it also belongs to bring

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* It is, however, only in so far as a man is aware of the probability, that in the event in question the unpleasant consequence in question will befal him, that the obligation can possess any probability of proving an effective one.

† See Principles of Morals and Legislation, chapter iii. vol. i. p. 14.

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to view the causes by which the attention and perception of mankind have, to so great an extent, been kept averted from the only true and intelligible source of obligation—from the only true and intelligible explanation of its nature, as thus indicated.

On the exposition thus given of the term obligation, may be built those other expositions, of which it will form the basis, viz., of rights, quasi rights or advantages analagous to rights, and their respective modifications, as well as of the several modifications of which the fictitious entity, *obligation*, is itself susceptible.

Section VIII.

Of Modes of Exposition subsidiary to Definition and Paraphrasis.

1. Synonymation—indication of some other word, or words, the import of which coincides, or agrees with the term to be expounded, more or less correctly.

The use to be derived from the employment of synonymation, consists in maximizing the number of the persons by whom conception, clear of obscurity and ambiguity and incorrectness, may on each occasion, be collected from the several expressions.

It is not, however, without great danger of error, that any two words can be stated as synonymous.

2. Antithesis—indication of some other word, or words, the import of which is opposite to that of the word in question.

3. Illustration—bringing to view some word, or words, by which, in any one or more of the above ways, or in any other way or ways, *light* may be thrown upon the import of the word in question, *i. e.* the import of it may, in some way or other, be rendered clearer, *i. e.* more surely clear as well of obscurity as of ambiguity.

4. Exemplification—indication of some individual, or of some lesser aggregate, as being included in the name of the aggregate in question.

Without any difference, or, at any rate, without any difference worth remarking, all these subsidiary modes of exposition seem capable of being applied with equal propriety and utility, whether the main mode of exposition be in the form of a *definition*, or in the form of a *paraphrasis*.

5. Description is a detailed exposition of those properties, the exhibition of which is not necessary in order to distinguish the object in question from all such which are not designated by the same name. It may, accordingly, be more and more ample to an indefinite degree. A definition is a concise description, a description is an enlarged definition.

Description may be considered as referring to an individual, in which case it may be termed *individual* description, or as referring to the name of a collective entity, in which case it may be termed *specific*.

The differences, in use and importance, between individual and collective description are analogous to those which distinguish the corresponding operations of individuation and definition. Definition applies to an indefinite number of individuals, connected together only by those properties exhibited by that operation, and, therefore, by means of it, whensoever any individual is brought to view, a decision may be formed, whether it does or does not belong to the aggregate in question. The individual characterized by individuation is unique; being unique, every property described as belonging to him must have belonged to him at the time and place of his individuation; but the greater the number of properties enumerated, the less chance is there of their aggregate being possessed in common by other individuals, or of their not having undergone any change other than such as may be accounted for, and calculated upon, during the change from the time and place fixed by the individuation. Description, therefore, though itself uncertain as to answering the purpose intended, is the only mode of exposition which can efficiently be adopted in such cases.

6. Parallelism is the pointing out of certain particular properties of a thing, with a view to the showing the resemblance it has to some other thing. Its use is to resolve any doubts which may arise, either from imperfect conception or imperfect expression, whether the object in question does or does not belong to the class of objects expounded.

Comparison is an act by which Distinction and Parallelism may be indifferently carried on.

7. Enumeration is the exhibiting the nature of the class of things characterized by any name, by bringing to view the names of certain subordinate sorts of things, or even certain individual things which it is meant to signify. It may be complete, or incomplete.

Enumeration is arithmetical or systematical. Systematical enumeration is by division, or rather is accompanied with, and performed by division. It is the gathering up and naming of the parts which result from the division of the whole.

8. Ampliation is the declaring concerning any word, that it has been, or that it is intended that it should be understood to have a more extensive meaning than, on certain occasions, people, it is supposed, might be likely to attribute to it,—that is, to comprehend such and such objects over and above those objects which they, it is supposed, would be apt to understand it to comprehend.

9. Restriction is the declaring concerning any word that it has been, or that it is, intended, it should be understood not to have so extensive a meaning as, on certain occasions, people, it is supposed, might be likely to attribute to it,—that is, not to comprehend such and such objects of the number of those which they (it is supposed) would be apt to understand it to comprehend.

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Section IX.

Distinction and Disambiguation what?—in what Cases employed.

Distinction, or real Antithesis, is the pointing out of certain particular properties of a thing, with the view of showing its dissimilarity to some other particular thing with which it is apprehended it may be confounded in such manner as to be deemed either the same with it, or more similar to it than it is in reality.

Distinction precedes division in the scale; distinction exhibits the relation of the object to the equally ample objects, its congeners; division breaks it down into its component species; distinction is a fragment of a supposed preceding division of an ampler term, bearing the ratio of a genus to that in question.

Disambiguation is distinction applied to words.

Such is the imperfection of language; instances are numerous in which the same words have the same audible with their attendant visible signs, and, in the same language, have been employed to designate objects that have nothing in common.

Be the word what it may, if so it be that it is wont to be employed in more senses than one, between or among which no coincidence, either total or partial, is perceptible, when, at the same time, while by one person it is received in one sense, by another person it is received in another different sense,—an operation, necessarily preliminary to definition, is distinction or disambiguation; in other words, when so it happens that the word in question has been employed in the character of a sign for the designation of several objects, insomuch that, without further explanation, it may happen to it to be taken as indicative of one object, when, by the author of the discourse, it was meant to be indicative, not of that, but of a different one, what for the exclusion of such misconception, may every now and then be necessary, is—an intimation, making known which of all these several objects the word is, in the case in question, meant to designate, and what other, or others, it is not meant to designate.*

Take, for example, the English word *Church;* this English word is uniformly considered and employed as the correct and complete representative of the Latin word *Ecclesia*, which, in other letters somewhat different in appearance, serves for the designation of the same sound as the correspondent Greek word; in French, *Eglise*.

1. Among the Greeks, in its original acceptation, *Ecclesia* was employed to signify an assembly of any kind; it was manifestly from the union of two words, εκ and καλεω, which signified to call out, viz. for the purpose of a joint meeting, and more particularly of a joint meeting for a public, for a political purpose.

2. Thence, among such of the first Christians whose language was Greek, it came to signify, in particular, such assemblies as were held by these religionists, as such, whether for the purpose of devotion or conjunct economical management.

3. In an association of this kind there was commonly, at least, one member, whose occupation consisted in taking the lead in their common exercises of divine worship, and by the exposition of that book, or collection of books, which, by all of them, was recognized as constituting the standard of their faith and action, to administer instruction to the rest. The operations thus performed being considered as *serviceable*, with reference to the persons at whose desire they were performed, the persons by whom they were performed were, accordingly, sometimes designated, in consideration of such their services, *ministers*, the Latin word for servants; sometimes, in consideration of their age *Presbyters*, from πρεσβυτερος, which was the Greek word for Elders, *i. e.* for men of any description when advanced in age (from which word Presbyter, the French word *Prestre*, and the English word Priest,) sometimes in consideration of their acting as overseers or overlookers, overlooking and overseeing, in relation to deportment, the behaviour of their disciples, the members of the association at large, Επισκοπος, *Episcopi*, whence the English word Bishop.

In process of time, those members of the association whose occupation, originally with or without pay, consisted, on the occasion in question, in acting as the servants of all, came to act as rulers over the members at large, at first on this or that particular occasion, at length upon all occasions.

At this time, besides the other senses, of which mention will require to be made presently, the word Church came to signify, according to the purpose which, by those who were employing it it was designed to serve, three very different assemblages of persons: viz. 1. The whole body of the persons thus governed; 2. The whole body of the persons thus employed in the government of the rest; and, 3. The all-comprehensive body, or grand total, composed of governed and governors taken together.

When the persons in question were to be spoken of in the character of persons bound to pay obedience, then by the word Church was meant to be designated these subordinate subject-members of the association, in a word the subject many. When the persons in question were to be spoken of in the character of persons to whom the others were bound to pay obedience, then by the same word were designated the *ruling few;* when, for the pur-

* Multisensual, by accident and without analogy. Multisensual, by reason of analogy; under one or other of these heads, may all the cases in which it can happen to a word to stand in need of *distinction* be comprised.

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pose of securing in favour of both parties, and especially of the ruling few, the affections of respect and fear, then would the import of the word open itself, and to such an extent, as to include under one denomination the two parties whose situations and interests were thus opposite.

4. From designating, first, the act of calling together an assembly, then the assembly composed of all persons, and no other than all persons, actually assembled together at one and the same time in a particular place, and then all the persons who were regarded as entitled so to assemble at that place, it came also to be employed to designate the place itself at or in which such assembly was wont to be held: the *place* consisting of the *soil*, the portion of the earth's surface, on which, for containing and protecting the assembly from the occasional injuries of the weather, a *building* was erected, and such building itself when erected.

Such as above being the purpose for which the sort of building in question was erected, viz. the paying homage to God, God, although present at all times in all places, was regarded as being in a more particular manner present at and in all places of this sort; attentive to whatsoever was passing at all other places, but still more attentive to whatsoever was passing in these places.

Being thus as it were the dwelling-places of God, these places became to the members of the association objects of particular awe and reverence, of a mixture of respect and terror—they became, in one word, holy; whereupon, by an easy and insensible transition, this mixture of respect and terror came to extend itself to, upon, and to the benefit of, the class of persons in whose hands was reposed the management of whatsoever was done in these holy places: holy functions made holy places, holy places and holy functions made holy persons.

On the score of beauty, admiration; on the score of kindness and tenderness, love; on the score of fitness for domestic management and rule, respect: these affections are in use to find their joint object in the character or relation designated by the word mother. Admiration, love, and respect, on the one part; all these are on the other part so many instruments of governance. The servants of the subject many had their assemblies for acting in such their capacity, and securing to themselves the faculty of continuing so to do. Of these assemblies, the members were some young, some middle-aged, some elderly men. Upon contemplating themselves altogether in the mirror of rhetoric, it was found that of all these males put together was composed one beautiful female, the worthy object of the associated affections of admiration, love, and respect—the Holy Mother Church.

Besides this, this holy female was seen to possess a still greater quantity of holiness, than could have entered into the composition of the aggregate mass of holiness composed of the separate holinesses of the several holy males of which she was composed, had they not, in the above-mentioned holy place been thus assembled and met together. By ordinances issued by this holy female, a greater and surer measure of admiration, respect, and consequent obedience, was obtained than would have been obtained by the assembly in its plain and original character of an assembly of males, notwithstanding all their holiness.

By this combination thus happily accomplished, an effect no less felicitous and convenient than it was holy, was produced; in the holy compound, while all the perfections of which both sexes are susceptible were found united, all imperfection, as if by chemical precipitation, were found to have been excluded. The holy men might, notwithstanding their holiness, have remained fallible; the Holy Mother was found to be infallible. Her title to implicit confidence, and its naturally inseparable consequence implicit obedience, became at once placed upon the firmest ground, and raised to the highest pitch.

Great is the scandal, great to all well-disposed eyes the offence, if to her own children, or any of them, a mother has been an object of contempt: proportioned to the enormity of the offence is the indignation of all well-disposed spectators, the magnitude of the punishment which they are content to see inflicted on the score of it, and the alacrity with which they are ready to concur in promoting the infliction of such punishment.

How much more intense that indignation, should any such indignity be offered to that holy character, should her servants or even her ordinances be violated. Flowing, from the maternity of this *holy*, this *sanctified*, this *sacred* character—to all these epithets the same venerated import belongs, they deserve the same respect: how convenient and useful the result!

When an edifice of the holy class has been erected and duly consecrated, proportioned to the holiness, the sanctity, the sacredness bestowed upon it in and by its consecration, is the enormity of any offence by which it has been profaned and its sanctity violated.

When, again, an edifice of the holy class has been erected and duly consecrated, the more sumptuous, the more magnificent, the more lofty, the more admirable, the more venerable the structure, the greater the calamity, the wider the ruin, the more intense the shock arising from its being subverted, the more intolerable the apprehension of the danger of its being subverted, the more intense and implacable the indignation excited towards and pointed against all persons regarded or considered as capable of being the authors or promoters of so shocking a catastrophe.

Already has been seen the advantage derivable and derived by and to the rulers of the Church, themselves being that Church, by

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the creation of a Church capable of being violated.

Here may now be seen the advantage producible and produced by and to the same rulers of the Church from the creation of a Church, themselves being that Church, capable of being subverted.

By any unholy person is this holy will in any particular opposed, or threatened to be opposed,—that same sacrilegious, unholy, profane, unbelieving infidel, miscreant, reprobate person is already a violater, and, in intention, a subverter of the Church, worthy of all indignation, all horror, all punishment, all vengeance, which it is in the power of any dutiful and worthy son of the Church to contribute to pour down upon his devoted head.

In the above example may be seen an instance of that impracticability which is liable to have place,—the impracticability of exhibiting a definition of the term in question, where the import of the term is such, that, antecedently to any such operation, a division of the contents of such its import requires to be made, its imports being in such sort compound and diverse, that no one exposition, which shall at the same time be complete and correct, can be given of it.

In the particular instance here in question, although before any correct definition could be given, it was necessary that an apt division should be made, yet, when once such division has been made, the need of any ulterior exposition in the shape of a definition may, perhaps, be seen or supposed to be, pretty effectually superseded; other instances might, perhaps, be found in which such ulterior exposition might still be requisite.

Beard.—Do you mean the beard of a *man?* Beard!—do you mean the beard of a *plant?*—for example, barley or wheat? By these questions *division* is already made: and then for the instruction of any one to whom (he being acquainted with other sorts of wheat) it had not happened to him to have heard of the sort called *bearded wheat*, some sort of an *exposition*, in the shape of a definition, might be necessary.

In the above instance the imports, how widely and materially soever different, might, however, be seen to be connected with each other by a principle or chain of association. But the more important, especially in respect of practical purposes, the difference is, as also, the more liable the several senses are to be mistaken for each other, and that which, in one sense, is not true, however in another sense it may be true, to be understood in the sense in which it is not true, the more material is it that whatsoever distinction has place should be brought to light, and held up to view.

In all matters relative to the Church in so far as concerns the interests of the members of the Church, the good of the Church ought to be the object pursued in preference to any other. By each of two persons this proposition may, with perfect sincerity, have been subscribed. But according as to the word Church, the one or other of two very different, and in respect of practical consequences, opposite imports, has been annexed, their conduct may, on every occasion, be with perfect consistency exactly opposite; one meaning by the word church *the subject many*,—the other, by the same word, the *ruling few*.

At the same time, the number of pronounceable changes of which the letters of the alphabet are susceptible, being, how ample soever, not altogether unlimited, instances cannot but have place in which, to one and the same word, divers imports, altogether uninterconnected by any such bond of association may have happened to be attached.

Many, however, are the instances in which, of two or more in appearance, widely different imports, the connexion, though real, may not be generally perceptible.

In French, by one and the same word, *worms* and *verses* are designated. Between two objects so widely dissimilar in any mind would there have existed any principle of connexion?—Possibly not; in this instance possibly no such connexion has had place; but neither is the contrary impossible. The French *vers* is from the Latin *versus*, a verse; but, in Latin, *vermes* is the name of a worm; in the same language *verto* is, to turn: and, who can say but that of *versus* and *vermes*, this verb *verto*, may have been the common root. "Tread upon a worm and it will turn," says an English proverb; and, in the construction of verses, how much of turning the stock of words of which the language is composed requires, is no secret to any person by whom a copy of verses has ever been made or read.

Section X.

Modes of Exposition employed by the Aristotelians.

In the preceding sections we have seen what the species of discourse, called an exposition, is, and of what modifications it is susceptible. Of some of these no conception appears to have been entertained by the Aristotelians. Others, it will now be seen, have been noticed by them, and stand comprised under the head of *definitio*, definition.

Of these modes, by far the most important is the one, styled in the language of ancient Logic, *definitio per genus et differentiam.*

It consists in an indication given of a certain class of objects, to which the object in question is declared to belong, that class being designated by a denomination styled a generic name. But the case being such that the object in question is not the only object which belongs to that class, some mark is, at the same time, attached as indicative of some property which is possessed by the object in question, and not possessed by any other in-

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dividual, or sub-class of objects included in that same class.*

Here, then, it may be seen already to what a degree the ancient Logic,—for these 2000 years the only Logic,—has in this by far the most useful track of it, the *tactic* branch, been all this while deficient. Its defectiveness of arrangement forms a sort of counterpart to its defectiveness in respect of argument, as exemplified in its list of Fallacies.†

To objects in general the system of division has never yet been applied, though, towards exhibiting the indefinite chain of divisions, one other advance, it is true, had been made by the ancient Logic. This advance consists in the use of the term *genus generalissimum*. By this term intimation, how obscure soever, was given of these links,—of the three highest links in this chain. By the term *genus generalissimum* was designated the first class; by the genus which was not the *genus generalissimum*, but of narrower extent, and comprised within it, the next class; and, by the term species, a class which was to the genus what the genus was to the *genus generalissimum*—a bi-sub-class.

Assigning the appropriate genus being one of the two operations included in the idea of a definition, according to this exclusively common acceptation of the word, the consequence was, that whatsoever names were of such sort that no genus, in the import of which the classes respectively indicated by them were contained, were afforded by the language in use, of the words so circumstanced no such exposition as a definition, properly so called, could be furnished.

Susceptible of receiving a definition in this usual, and, indeed, only sense of the word definition, a *term* cannot be, unless it belong to and form a step in some assignable scale of aggregates, related to each other in the way of logical subalternation.

This word definition has, in many cases, been used as the collective designation for all modes of exposition. Sanderson does not, however, appear to have fallen into this error, he always using *definitio* alone as the name of the genus and *definitio per genus et differentiam*, as the name of the particular species. In the foregoing chapter his example in this respect has not been followed, both on account of the difficulty there would be in finding a more appropriate single-worded denomination for the species, and, on account of the more expressive nature of the word *exposition* as the name of the genus.

The Bishop has certainly not succeeded so well in the very first exposition he had occasion to give. In his chapter on the subject of the very word definition,‡—*Definitio*, he says, *est definiti explicatio*. And what, we may ask, is *explicatio?* The answer might, with equal clearness, be *Explicatio est explicati definitio*. The words employed are synonymous; and the one as easy to be understood as the other. Not one of the rules of exposition laid down in the next page are followed in this case; in fact, no new idea is at all conveyed. If any tolerably correct conception can be formed of what he meant by *definitio*, it must be gathered up from the subsequent enumeration of its species, and not from this exposition.

His first division of the subject nearly coincides with its division into the exposition of *words alone*, and of objects connected with words; but he falls into an error by giving to the results of this division the designations of *definitio nominis* and *definitio rei*; every exposition being the exposition of a name, the difference consisting in this,—that in one case we consider the name alone, in the other, the object in conjunction with that name, without which we cannot speak, nor perhaps think, of any fictitious entity, or of any real one, which is not present to our perception.

No mention is made of exposition by representation,—the only mode that can be employed where the parties in question have no common language.

The division of *definitio nominis* would appear to comprehend the modes of *translation* and *etymologization*, whilst *definitio rei* may have been intended to mark the distinction made above into necessary and subsidiary modes of exposition; by the first, such properties only being exhibited as are necessary for exact exposition; by the latter, other properties being presented to view for the purpose of facilitating comprehension. Exposition by paraphrasis, for want of a due conception of its nature, is put into the latter class; the genera generalissima, and those fictitious entities to which that mode applies, being designated as things not susceptible of a perfect exposition. Of definition they certainly are not susceptible; but the exposition of them by paraphrasis may be quite as perfectly applied as definition to real entities.

Of modes of description, the enumeration, or rather exemplification, is very imperfect. The first and last examples are alone applicable. *Frui est uti cum voluptate*, is a definition; *Sol est mundi oculus*, belongs to archetypation; *Frigus est absentia caloris*, is mere translation.

The four *canones definitionis* correspond with the four properties desirable in discourse:—1. *Definitio verbis propriis, perspicuis, usitatis, et ab omni ambiguitate liberis, exprimatur*, refers to clearness of expression; *Nihil contineat*

* Here, by the by, we have two sub-classes, formed by the division of any one class; of the one class in question, whatever it be. But as this class is divisible into two classes, say, sub-classes; so may each of these sub-classes be divided each into two bi-sub-classes,—each bi-sub-class into tri-sub-classes, and so on without end.

† See Book of Fallacies, Introduction, section 2, vol. ii. p. 379.

‡ Book i. chap. 17. *De Definitione.* [Sanderson says, "Definitio est Definiti (*sive nominis sive rei*) explicatio.—*Ed.*]

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superflui, to conciseness; *Nihil desit*, to completeness; *Sit adequata definitio*, to correctness. How far the author has himself followed these rules, has already appeared in an instance derived from this chapter.

The *modus investigandi rerum definitiones*, detailed in the fifth paragraph, are sources of classification, and belong to that head. His division of *Definitio*, lib. iii., cap. 16., refers also to that subject.

CHAPTER VIII.

OF DIVISION.

SECTION I.

Of the different Modes of Division.

Division is either systematical or unsystematical.* Systematical division is the indication of the species, without the assignment of their reciprocal *differentiæ*.

Division may be complete or incomplete. The following is an example of complete and exhaustive division:—Vitale est vel sensitivum, *i. e.* animal, vel non sensitivum, *i. e.* planta; sensitivum est vel rationale, *i. e.* homo, vel irrationale, *i. e.* brutum.

Strict division is bipartite; loose division is multipartite.

Division imports separation; the separation has not been performed if the parcels are not distinct. They are not distinct if any object which is included in the one is included in the other.

Physical and *Psychical*—under one or other of these two epithets may every possible mode of division be comprised; physical, where the subject matter to be divided—say the *dividend*—is a physical body or aggregate; psychical, where it is a psychical, or say an ideal aggregate, viz., any aggregate of objects individually assignable or unassignable, for the designation of which a common name, or say appellation, has been provided.

Of these modes, the first—the physical—is the only original and proper mode. It is the *archetype* of the other. The ideal aggregate is feigned to be—is considered as being a body, a mass of matter; any number of lesser aggregates into which, they being contained in it, it is considered as being capable of being resolved, are considered as so many parts into which it is considered as capable of being divided.

Of these two modes, the *psychical* is the only one that belongs to the present design; the only one employed in the exercise of the art of logic. In an institute of that art, the physical would not have had any title to a place, had it not been for the light which it may serve to throw upon, the explanation which it may serve to give of the psychical, which has been deduced from it.

It is by arrangement in a line of subalternation in this mode, and no other, that the operation of division, understand of psychical division, can be performed. In the character of a *dividend*, a name constituting a receptacle of a comparatively larger content, is assumed. Its contents, the articles contained in it, are lodged in two or more other receptacles, so constituted, in respect of extent, as to contain all of them together the exact amount of the contents of the *dividend* or greater receptacle; the aggregate contained in the greater receptacle being considered as divided, the component articles or units of the aggregate mass are considered as distributed among the compartments which, by such division, have been created.

SECTION II.

Of bipartite, dichotomous, or perfect Division.†

Be the *subject* of discourse, and the purpose for which the subject is taken in hand, what they may, *correctness*, and, with reference to the end, *completeness*,—these are the two qualities which every man, in proportion as it is his desire that the expression given to his thoughts should be at once true and useful, would be desirous should be found to appertain to it.

For *correctness* at large, not much instruction can be given, without special reference all along made to the particular nature of the subject, and the purpose in view, *i. e.* the portion of the field of thought and action operated upon. But, be the purpose and the subject what they may, correctness will, in a considerable degree, depend upon clearness; correctness of conception, on the one part, upon clearness of expression on the other; and, in so far, some instruction on the subject of correctness has already been endeavoured to be administered.

But a case may be brought to view, nor that a narrow one, in which correctness altogether depends upon completeness; insomuch, that if the discourse be incomplete, it is certain, to the exact amount of the degree of incompleteness, to be likewise incorrect. Such, it is evident, is the case, in so far as it has happened to a man to undertake, whether for his own sake, or for the sake of others, that his view of the subject, and accordingly the expression which he gives as the result of that view, shall prove complete.

Towards the accomplishment of an object at once so desirable, and at the same time so much above the reach of human power, logic may perhaps be seen to afford a sort of instrument or engine of greater power than might readily have been imagined. This engine is the exhaustive mode of division.

* Consolidation is the converse of Division. Division is *per descensum*. Definition *per ascensum*; Synonymation *per æquum*.

† See farther on this subject, Appendix B.; and supra, p. 102, *et seq.*

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To answer its intention in the completest manner, an analysis or division must always be throughout dichotomous; "the condividents," says the logical compend, "ought to be distinct and opposite."*

Every division is a distribution of individuals:—an assignment of distinct names, simple or compound, univocal or multivocal, under which, as if in ideal compartments, these individuals may be found. These compartments were marked out in the mind of him who distinguished them, marked out by certain properties or qualities in such sort, that an individual possessing such a property, was deemed to belong to such a compartment, an individual possessing such another property, to such another compartment.

For the purposes of discourse, these respective groups of individuals are distinguished by certain *names* corresponding to these properties;—one name denoting that the individuals it is applied to, the individuals comprisable within the compartment it denominates, possess all of them such a property, or set of properties; another name that the individuals it is applied to possess another property, or set of properties.

Now the use of different names is to distinguish different individuals,—to distinguish the individuals possessing one property, or set of properties, from the individuals possessing another property, or set of properties;—in so much, that if on any occasion a man wish to be understood to say of any one individual, or set of individuals, what he wishes not to be understood to say of another, he may have the means of making himself understood accordingly.

Conceive, then, a group of individuals which are known apart, and distinguished from other individuals by a certain name. Of a part of this whole number of individuals, is it wished to say something which it is not wished to say of the remaining part; in what way, then, is this to be done? There is but one way, that is, by dividing in imagination the whole set, into a certain number of lesser sets,—in the present instance into two; in other words, by distributing the whole assemblage of individuals into two compartments, in one of which shall be contained all the individuals to which it is wished to apply the proposition; in the other, all those to which it is *not* wished to apply it.—And these compartments that they may be known wherever there is occasion to bring them to view, must be characterized each by a peculiar name.

A division, to answer this purpose, must be exhaustive, must comprise the whole of the subject.

Call the parcel to be divided A: instead of dividing it into two parcels only, such as B and C, divide it at once into three parcels, B, C, and D. Is this division as satisfactory as it might be? No; it will probably be perceived that it is not, though the reason may not be immediately perceived: what then is the reason? It is as follows:—It exhibits all the discongruencies of the three parts or members, but it does not exhibit all their congruencies. Let them be properly distributed and named, that is, so distributed and named, that to no article to which one of the names is applied, could either of the other two names be applied; then, no A that is a B, is either a C or a D; no A that is a C is either a B or a D; and no A that is a D, is either a B or a C. The discongruencies between these several sets are sufficiently expressed,—expressed by the circumstance of their being condividents members of the whole in question, according to a plan of partition which is announced to be an exhaustive one; but on the other hand, there is a congruency between them which is not expressed.—Every A which is a B, agrees with a C, in this that is not a D.—Every A which is a C, agrees with a D in this that it is not a B.—And every A which is a D, agrees with a B in this, that it is not a C.

It is plain, therefore, that A, instead, of being divided into three parcels, B, C, and D, might always, in the first instance, be divided into two, only B and C; for of the three parcels, any two may be consolidated into one, having this property in common, that no A that belongs to either of them, belongs to a third.

And this plan of division is the more simple of the two: first step,—Every A is either a B or a C; second step,—Every B is either a D or an E. In the first step, the attention gets repose: it has but two compartments to examine, in order to see that every A belongs to one or the other of them—which is shown by the circumstance of their having for names the name A, with an epithet, and that no A that belongs to the one, belongs to the other.

In the case of an aggregate of the physical kind, the greatest number of integral parts into which it is capable of being divided, is always a determinate number: in a bushel of apples, containing 400 apples,—400 is that number; in a bushel of wheat, containing 400,000 grains of wheat,—400,000 is that number: in a garden containing every species of plants, suppose 65,536 to be the number of each different species,—65,536 is that number.

These 65,536 plants, each of them of a species distinguishable from every other species; suppose it required so to divide into subordinate and lesser aggregates, the universal or all-comprehensive aggregate, of which, by the supposition, the word plant is the name;—to divide it in such sort, that by a series of successive divisions, from the descriptions given of the products of these several divisions, it should be made to appear in what points each of these 65,536 plants coincided with and in what points it disagreed with the description given of every other; the following is the only mode of proceeding by which the object can be accomplished:—Divide the whole

* Sanderson, lib. i. cap. xviii.

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aggregate into two equal parts, or say, divisions; divide each of these divisions into others, which call divisions of the *second order*, —calling the two first-mentioned divisions, divisions of the *first order*; each of these divisions, dividing always by two, divide into divisions of the *third order*,—the total number of divisions eight: and go on, dividing always by two, until the whole number of the component aggregates, thus formed, comes to be 65,536, the assumed number of different species of plants. This mode of division is termed from the Greek, dichotomous; from the Latin, bifurcate,—two-forked.*

This mode of division is subservient to the obtaining of the properties of clearness and correctness, in respect of the conceptions formed and entertained of the subject matter of consideration.

Assured, and altogether incontrovertible, is its all-comprehensive, or say exhaustive, property,—it has place at the very first step, or stage of division,—it has place at every other, be they ever so numerous.

At every step, one article of information it affords as equally incontestible;—it shows a point of agreement and a point of difference between the two results which it brings to view,—point of agreement, the properties belonging to the genus of which they are species, —point of difference, some property which the one has, the other has not.

Still, however, of all the distinguishable species contained in the highest genus, the genus generalissimum, scarcely are there any limits to the number of those which may still remain unincluded. At the same time, still do there, whatsoever be the number, remain means of reaching them by fresh divisions from new sources.

This points to another resource for aiding the mind in the performance of this task.

When, after a first division, the all-comprehensive process has proceeded on in a course of subdivision, till it have picked up as many of the objects belonging to the source as are found capable of being designated by it, if any remain unarrested and unsorted, look out for a fresh source of division, and go on as far as that will carry you.

If any still remain behind unenlisted, look out for another source of division, and so on.

When in a number more or less considerable, divers sources have thus been employed and exhausted, take in hand the sources themselves, apply to them the exhaustive mode of analysis, their eventual points of agreement and difference will, at any rate, be elicited; and if the articles that require to be taken up are not all of them enlisted, some fresh means of enlistment may perhaps be brought to view.

* On this plan of division, between the number of operations performed, and the number of included aggregates to which the original all-embracing aggregate is reduced by those operations, there exists an established ratio.

Section III.

Of the Aristotelian Rules of Division.

By the Aristotelians no division was recognised as legitimate, or at any rate as perfect, unless it were exhaustive.

The object to be divided being termed the *dividendum*, the parts into which it is divided, and which constitute the result of the operation, the dividing, or condivident members;—follow, according to Sanderson, under the name of canons of perfect division, the following rules.†

1. Let the parts be such as that, by their union, the whole shall be recomposed. *Membra absorbeant totum divisum.*

2. The dividend is greater in extent than any one of its members—it cannot but be equal to all of them when put together, *Divisum esto* [say rather *est*] *latius singulis suis membris; adæquatum universis.*

3. Let the condivident members, in their import, be distinct from, and opposite to, each other;—in such sort, adds an explanation, that they be not liable either in any point to be coincident, or to be confounded. *Membra condividentia sint contradistincta et opposita;* ita ut confundi nequeant, vel coincidere.

4. The members which are produced by each division, let them be the nearest and immediate members, and let the number of them be as small as may be. *Divisio fiat in membra proxima et immediata et* (quam fieri commodè potest) *paucissima.*

From the nearest result thus formed (continues the text in the way of explanation) to the more remote and minute portions descend by subdivisions. A proximis porro ad remotiora et minutiora descendendum per subdivisiones.

The dichotomous mode of division (it goes on to say) is that which has been most approved of, where it can conveniently be employed. *Dichotomiæ* (dichotomies) *sunt laudatissimæ, ubi commodè haberi possunt.*

Nor yet (continues this explanation) ought it to be everywhere hunted after, too superstitiously and anxiously pursued, as it is by the Ramæans. *Non tamen nimium superstitiosè et anxiè ubique venandæ, quod faciunt Ramæi.*

An example, unfortunately not a very unfrequent one, of the conjunction of self-sufficiency and emptiness, may be seen in the account of Dichotomy, as above delivered.

Of the existence of a state of things in which dichotomy can be employed commodiously, intimation is given, and in that state of things, says the instructor, dichotomies are most praiseworthy things. What is that state of things? To any such question not so much as any, the smallest endeavour and attempt, is made to find an answer.

What renders the deficiency the more to be regretted, is the danger which it seems there is of dichotomies being too superstitiously and

† Sanderson, lib. i. cap. xviii. *De Divisione.*

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anxiously hunted after, a danger which, in the practice of the sort of persons here called Ramæans, (meaning, it should seem, the followers of a certain *Peter Ramus*,) had actually been realized.

Upon the whole, however, of two propositions relative to the matter in question, viz. the dichotomical, or bifurcate mode of division, intimation is hereby given, viz. 1, that there are certain cases in which this mode of division has its use,—2, that there are cases in which,—forasmuch as in those cases, it either has no use at all, or none but what is outweighed by inconvenience,—the practice of employing it may be considered as matter of abuse. Let us see whether some criterion may not be discernible whereby the one of these classes may be distinguished from the other.*

Section IV.

Relation of Synthesis to Analysis.

Psychical, or say logical, division supposes the antecedent existence of psychical *aggregation*. A bushel of apples, a bushel of wheat cannot be divided until it has been collected. *Psychical* division has no subject but the ideas commonly called general ideas. These general ideas are all aggregate, or say abstract, ideas, formed by *aggregation* and *abstraction* out of simple ones.

Of the aggregate thus formed, the extent is determined and measured by that of the import of the *term*, the appellation employed for the expression of it.

If of this extent the amplitude be, in a certain degree considerable, the aggregate idea, of which that appellative is the sign, will hardly have been formed, but that, antecedently to its formation, some other aggregate idea, or ideas, less ample in extent and in their whole, contained within the one in question, will also have been formed, formed, and by their respective appellatives designated and fixed.

Thus, in a country in which human society has, in the scale of civilisation, reached the *pastoral* state, an appellative correspondent to the word *animal* will scarcely have been formed till after the two appellations corresponding respectively to the words *man* and *sheep* have been formed and brought into use: by the observation of the properties which are possessed by all men and not possessed by any sheep, the aggregate idea expressed by the word *man* will have been formed; by the observation of those properties which are possessed by all sheep and not possessed by any man, the aggregate idea expressed by the word sheep will have been formed.

In the instance of *man*, the properties which are common to all men, can never have been presented to the senses of any man, but at the same time the properties by which the several different men that have come under observation, have differed from each other, have also, and at the same time, been presented to his senses.

The respective aggregates, composed of the several simple ideas presented by each of these men respectively, may be termed *individual aggregates*; the aggregate composed of the several simple ideas, drawn alike from the contemplation of all these several men, and fixed and designated by the classical term *man*, may be termed *a classical aggregate*.†

In the formation of the aggregate idea corresponding to the term man, in the formation of the classical psychical aggregate termed man, the attention has turned itself aside from all the several simple ideas that have alike been presented by the above-mentioned individual aggregates, turning itself at the same time, and therefore confining itself, to such of those simple ideas as have been presented by every individual belonging to that class comprehended under that appellative; and those to which it has thus exclusively turned itself and confined itself, it may be said by so doing to have *abstracted*, i. e. drawn off from the rest. It is thus that to the process or operation by which, in this way, *classical aggregates* are formed, the term abstraction has been applied, and to the classical aggregates themselves the term *abstract ideas* as well as *general ideas*.

These explanations premised, the time may have come for observing, that where, of the name of a classical aggregate the extent is to a certain degree considerable, it will scarcely have been formed but by repeated exercises of the process of abstraction, a certain cluster of ideas having been first abstracted, or as it were, distilled from the cluster contained in the several individual, *i.e.* physical aggregates; and from the product of this first distillation, others, drawn off to compose what may be termed a classical aggregate of the *second* stage from the bottom; from this product of the second distillation others again drawn off to compose an aggregate of the *third* stage from the bottom, and so on.

By certain terms, which, in the description of this process, have sometimes been employed, (viz. *synthesis* and *analysis*,) it seems as if it had been taken for granted, that the two operations thus denominated were each of them the exact counterpart and converse of the other: that the stages passed over in the one process and in the other would, everywhere, and on all occasions, be exactly the same, consequently the number of those stages likewise; and that whatsoever had by *synthesis* been put together, the putting of that asunder—of all that,

* With these words the MS. of this section ends, and the subject does not appear to have been further pursued.—*Ed.*

† To this purpose *classical* is preferred to general; class having no such determinate ratio as genus bears to species.

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as far as they both went, and no more than that,—was the operation performed by *analysis*.

Wide indeed from the truth of the case would any such conception, however, be found. Small has probably been the number of the successive operations of the kind in question—viz. abstractions, by which,—correspondently small the number of the stages in passing in or through which, the idea of the most amply extensive classical aggregate of which the mind is capable of forming to itself an idea, has in this way been formed. Of this most extensive aggregate, termed by the logicians of antiquity, the *genus generalissimum*, being, or existence, or entity, is the name. *Five*, or at the utmost, *six*, is the number of successive distillations by which this most sublimated and refined of all abstract ideas has, as appears, been formed. Five, or, at the utmost, six, has accordingly been the number of steps successively taken by the mind in its ascent towards this most exalted pinnacle: five, or, at the utmost, six, the number of *stages* at which it has stopped. Of these *abstractions*, these *distillations*, these *steps*, these *stages*, the number corresponds to and is indicated by the number of the ramifications exhibited by the famous Porphyrian Tree,* and of these operations and their results, indication has been given, and at the same time recordation made, by the names respectively employed for the designation of the classical aggregates of different amplitudes which have been their respective products.

Far indeed from being thus limited is the number of aggregates of different orders capable of being formed by the decomposition of that all-embracing aggregate.

Division the first all-comprehensive.—Divide the aggregate of universal amplitude *being* or *substance* into its two aggregates immediately issuing from it, you have *corporeal* beings and *incorporeal*. For corporeal beings, say, in one word, *bodies*; as, on the other hand, for incorporeal beings, in one word, *spirits*.

Division the Second.—Divide the aggregate, corporeal beings, into its proximate component aggregates, *living* and *not living*; for its proximate component aggregates, you have those endued with life and those not endued with life, to which latter description belong mineral bodies.

Division the Third.—Divide the aggregate corporeal beings endued with life, into its proximate component aggregates, you have such as are endued with animal life, with sensation as well as life, say in one word *animals*; and such as are not endued with sensation as well as life, say in one word vegetables.

It was from the observation and contemplation of individual animals, and from the observation made of a quality which such of them as were most exposed to observation had in common with one another, and which was not observed or observable in vegetables, viz. the habitual act of respiration, that the common name, expressive of the faculty corresponding to the exercising of that act, viz. *animal*, was first formed. Here then are four stages which have place alike in the ascending and the descending line.

But in the descending line, between the psychical aggregate designated by the word *animal*, and the individuals from the observation of which the existence was deduced of that faculty from which the classical appellative of that aggregate was deduced as above, there has been framed a whole nest of physical aggregates, one within another, in a long chain or series of *intus-susceptions* or enclosures; and so in the case of *vegetables* another such series; and so in the case of *minerals* another such; each such box, with its companions, at the same distance from the all-enclosing box, being the result of a division which at that part had been made of the contents of that larger box, within the limits of which they had all of them been contained.

Though at a few of the highest stages, the steps taken in the ascending line, and the steps taken in the descending line, are coincident, agreeing with one another in number,—in the line of ascent, they were taken with the seven-leagued boots of fairy land, assisted by the wings of the genius Imagination; in the line of descent, they were taken by Observation, retarded at every step by Reflection and Discernment, and in several tracks by Experiment.

Taken in their orginal acceptation, *synthesis* and *analysis*, the *synthetic method* and the *analytic*, are *packing* and *unpacking*; the latter operation being the exact converse or reverse and counterpart of the former: the road the same, the stages or stepping places the same, the direction alone different, and *that* opposite.

But very different it has been seen from a course thus simple in description, is the course taken by the mind when occupied in working in the field of logical method.

Instead, therefore, of the number of integral parts contained in a logical aggregate being a *limited*, in a word, a *given*, a *determinate*, or, at any rate, a *determinable* number, as it would be were it not for the powers—the unlimited powers, of decomposition and recomposition possessed by the human mind,—of these powers, one effect is to exclude as fruitless every possible attempt at circumscribing within any limited extent the number of such parts into which a logical whole is capable of being divided.

In the case of physical aggregates, it may be done; but not so in the case of logical ones. Take a bushel of apples: the number of integrant parts of that aggregate, each apple constituting one of those integrant parts, will be

* For an exemplification of the Porphyrian Tree, see Table IV. of Chrestomathia, and the correspondent notes, supra, p. 110.

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the number of apples that were put into the bushel, neither more nor less.

Some years ago, the aggregate number of all the species of plants then known was estimated at 40,000. Suppose a garden, and in it a specimen of every one of these 40,000 species; 40,000, neither more nor less, is, in this case, the exact number of integrant parts into which the aggregate here in question is capable of being divided. But, upon this supposition, 40,000 is not equal to the number of integrant parts called *species*, into which the logical aggregate, designated by the names of *plant* and *vegetable*, is capable of being divided.

In this supposed case, for every species there is one individual, and no more; for every individual, one species, and no more.

But as, within the extent of one species, an indefinite number of individuals may be, and habitually are, contained, so from any one individual, much more from a greater number of individuals, an unlimited number of species may be deduced.

No new species, it is true, can be formed, except so far as in description it is capable of being rendered different from every species which had been described, before it had ever been described. But, in regard to any of the observable species of natural bodies, taken as they come out of the hands of Nature, this is a condition, of the failure of which no reasonable probability seems to present itself. Take, for instance, the 40,000 different species of plants, that having, some years ago, been said to be the number of those species already known to be in existence. Of these, there exists not any one which has not some property, or aggregate of properties, which is not to be found in any of the others, and which constitute that *difference*, or say differential character, whereby it stands distinguished from every other. Of these differences, the ideas were respectively formed in the mind by the process of abstraction. They were formed from the observations made of some individual plant or plants, which, at the time of observation, were respectively considered as belonging to those same species. On this occasion, in the formation of any such species, what was done was, not to take for the character, or essence of the species, every *mark* whereby the individual in question, the individual, or individuals, then and there observed, was seen to differ from all individuals that had ever been observed before, but only some *one* or other small number of these marks. For, in all the different species of plants that have thus been formed, take any one whatsoever: answerable to the description, how ample and particular soever of that one species, will be found individuals in a multitude absolutely inexhaustible, no two of them so perfectly similar but that, upon a simultaneous comparison, differences, perceptible and describable differences, between them might be found.

Hence it is, that the denomination given to the operation by which the fictitious aggregates created by the joint powers of observation and imagination, or by the imagination alone, is, *abstraction*. Out of an indefinite number of peculiar marks, by which the several really existing individuals lying open to observation are distinguishable, the mind fixes upon some one or other comparatively small number, and leaving the others unnoticed, and in this way separating them from these others, makes its own use of them, applies to the purpose in question the property, or properties, thus *abstracted*; establishing them in the character of so many marks, whereby the thus new-formed species, and as many individuals as will ever come to be included under it, *i. e.* be found to exhibit marks of the same description, are made to stand distinguished, as supposed, from all other species* and individuals that are, ever have been, or ever will be, in existence.

Section V.

Misapplication of the Terms Synthesis and Analysis to Geometry and Algebra.

Expressing the difference between Geometry and Algebra is another of the purposes to which the opposite terms Synthesis and Analysis, with the methods respectively denominated from them, viz. the *Synthetic method*, and the *Analytic method*, have been employed.

But, between these two branches of science, no such difference or distinction will be found as that of which intimation is given, by that pair of correspondent and opposite appellatives.

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* Among natural philosophers, and more particularly among botanists, the word species has a particular and narrow import, whereby it stands distinguished from that of *variety*; for the composition of *a species*, those marks or combinations of matter alone are on this occasion taken and employed, of which it is supposed that on the part of all individuals descended, in the way of botanical descent, from an individual thus described, they will for ever continue to have existence; those which are regarded as being in the contrary case, being, for distinction sake, termed varieties; in such sort that by the term *variety* is expressed an aggregate subordinate to, and contained within, some one species, *of* which it is a *variety*. But of these attributions of everlasting immutability, in the one case, and mutability on the other, there can never be any ground stronger than conjecture; a conjecture which, though by experience found to be so far true as that the acting in conformity to the indication afforded by it, is found to be productive of practical benefit, yet is every now and then found to be erroneous. Accordingly, it is with suitable diffidence that the existence of the sort of distinction in question is commonly announced,—that such a collection of marks is indicative of a *species*, and not of a *variety*; that such another of a mere *variety*, and not of a *species*. Thus it is that species, in the botanical, or say phytological, sense, differs from a species in the logical sense.

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In Geometry, *quantity* is never considered but with relation to figure; in Algebra it never is considered with relation to figure: of the difference between these two branches of Mathematics, this account is at once true, short, and clear, and no other account that is in equal, if in any degree at all endowed with these qualities, will, it is believed, be found.*

In Algebra, as well as in Geometry,—in Geometry as well as in Algebra,—that which is unknown, or supposed to be unknown, is inferred from its relation to that which is known, or supposed to be known: in Algebra, unknown quantities, as expressed by letters, are made known by means of the relation they bear to known ones, as expressed by figures; in Geometry, unknown quantities, as expressed by figure, and supposed to exist as between figure and figure, or parts of the same figure, are made known by means of the relations they bear to known quantities, as expressed by figure.

In Geometry, true it is, that objects are put together; quantities known and unknown are put together; whereupon, of such as are unknown, a description is given, and a conception conveyed by means of the relation they bear to certain known ones.

Of Geometry this is true; nor is it less so when applied to Algebra.

A quantity is mentioned to me, of which I wish to know the amount, it being as yet unknown to me. By the amount, in this case, is always meant the amount in numbers; for, in truth, the subject of Algebra is number—numbers and nothing else. Suppose the number in question six;—in answer to my question, What is the number? the number six is not mentioned by that name; but I am told it is that number which is as great again as number three, or half as great exactly as number twelve. Simple as they are, either of these answers is already Algebra.

And it is thus that, by Algebra, the known and unknown quantities being put together, a description of such as are unknown is given, and a conception conveyed by means of the relation they bear to certain known ones.

CHAPTER IX.

OF METHODIZATION, OTHERWISE TERMED ARRANGEMENT. †‡

SECTION I.

Subjects to which it is applicable.

At the very first mention of the mental operation thus denominated, a distinction requires to be brought to view, a distinction respecting the nature of the subjects or objects to which it is applicable; for, according as it is considered in its application to the one or the other, of the two very different subjects or classes to which it is applicable, for the most part altogether different and disparate, will be found to be any rules from which the application of it may be capable of receiving direction and assistance.

On the one hand, a group of subjects or objects of any kind, considered as distinct, separate, and detached from one another; on the other hand, the fictitious body entitled a discourse,—a discourse of any kind, a literary composition included,—considered in respect of the mutual relations of which its several distinguishable parts are susceptible.

Of the operation termed methodization, or arrangement, the fictitious object, the fictitious receptacle, called *method*, is the fictitious result, or produce; when a number of objects are considered as methodized, they are said *to be put into a method.*

Method, as applied to *insulated objects;* method as applied to discourse: by these two denominations may the distinction between the two branches of method, resulting from the consideration of the two great fields to which

* In algebra, *quantity* alone, mere quantity, without regard to figure, is throughout the subject; in geometry, the subject of *figure*—of that other *subject*, is superadded; in fluxions, the idea of *motion* is introduced, in addition to those of quantity and figure.

† Considered as names of action, methodization and arrangement may on most occasions be considered and employed as interconvertible terms. But if there be any difference, methodization is that one of the two of which the field of applicability is most extensive. Compared with the word *arrangement*, the word *methodization* seems to have acquired more of an eulogistic sense, and accordingly, in company with the idea of arrangement, to convey the intimation that in the instance in question it has been well conducted, and that to the result of it the laudatory adjunct *good* may with propriety be applied; and, in so far as this is the case, the consequence is, that in any instance in which the sentiment of approbation is not intended to be annexed to the disposition, what is considered as having been, or being about to be made, the eulogistic term, methodization, would not be so suitable to the design as the more neutral term *arrangement*, or the word disposition, where the nature of the case admits of the employing a word, the import of which is so much more ample, and consequently, so much more lax.

Considered as names expressive of the result of this action or operation, the words *order*, *method*, and taken in this additional sense, the word *arrangement*, seem to want but little if anything of being interconvertible. Order, however, seems, as well as the word method, to have imbibed somewhat of an eulogistic tinge,—a tinge from which in this sense, as well as the former, the word arrangement appears to be, if not altogether free, much more so than either of those two.

‡ It will be observed that many of the subjects treated under the head of Methodization, are such as logical writers generally refer to the head of Division. For treating under this, which is generally considered as belonging to the synthetic department, some operations which, by logicians in general, had been viewed as purely analytic, the author gives his reasons below, p. 265.—*Ed.*

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it is applicable, be, it is hoped, commodiously brought to view.

The two species or modes of method thus constituted, may be compared with, and observed to bear some analogy to, the principle of the fundamental division applied of old to the field of quantity, viz. that which corresponds to the distinction for the expression of which the terms discrete and continuous were employed: by *discrete*—quantity, number, or rather numbers being designated: by continuous quantity, that which, by the juxtaposition of its ultimate parts, presents the idea expressed by the words form, figure, configuration, conformation or shape.

For illustration and explanation, take a discourse having for its field any portion of the field of *Natural History*. In this particular field will be comprised a portion, more or less considerable, of the whole number of distinct and distinguishable subjects belonging to that general field. To the aggregate of these subjects, the species, and that the only species of method or methodization applicable, will be that, to the designation of which, as above, the compound denomination, method, as applied to insulated objects, or, more shortly, to objects, has been appropriated. But of any discourse which has taken for its field any portion of the field thus brought to view, any part in and by which the art of method is applied to these same objects, will have constituted but one part, how large soever in comparison with the whole; and while, for the guidance of the mind in the disposition to be made of these same objects, one set of rules and observations will be adapted, another and a very different set of rules and observations will be found requisite for its guidance in the task of putting together the ideal fabric, termed a *discourse*.

Section II.

Methodization as applied to Objects—its Two Principles or Modes: Principle of successive Exhibition—Principle of connected Aggregation.

Applied to subjects or objects, *methodization* is an operation which, in so far as it has any determinate and useful import attached to this its name, bears an indispensable, though not a very prominent, nor, in general, sufficiently apparent, relation to the particular *end* or purpose to which it is or ought to be regarded as subservient. Methodization supposes a multitude of articles on which, in the quality of subjects, it has to operate; and, in so far as it is apt and useful, it is effected by making such a disposition of them as promises to render them, as far as depends upon itself, subservient to that purpose.

Physical and *psychical*, as in the instance of so many others, so in the instance of the present subject, this presents itself as the first distinction which the nature of the subject requires to be brought to view. Physical, in so far as the articles to which this operation is applied, are so many portions of matter: psychical, in so far as they are so many ideas, creatures of the mind, of the immaterial part of the human frame.

Psychical entities, *i. e.* ideas, not being capable of being communicated or so much as fixed and rendered determinate, otherwise than by means of the words employed to serve as signs of them; hence, in so far as psychical methodization is in question, words will be the instruments by which whatsoever is done will all along be considered and spoken of as done.

In so far as in any number whatsoever, any objects whatsoever are put together in a particular manner, by design directed to a particular end, the operation termed *methodization* or *arrangement* may be considered as performed, and the objects so dealt with are said to be *arranged* or *methodized*.

Disposition *by means of succession*, or priority and posteriority,—disposition, *without regard to succession*, or priority and posteriority,—under one or other, or both of these denominations, will every possible mode of methodization be found comprehendible.

And with equal propriety it will be found applicable to arrangement in the physical and in the psychical sense.

Priority and posteriority are relations that apply alike to place and time.

On this occasion, of the two Predicaments, *place* is the one of which the conception is commonly the most simple. Why? *Answer*. Because, where it is, in respect of *place*, that a number of objects are to be arranged, they may be all of them designated at the same time in such sort as to be present to the view of the individual in question at the same time. Whereas, if they are to be arranged with reference to time, without being arranged with reference to place, they cannot be brought to the view of the same individual at the same time.

Audible signs are the only signs by means of which objects are capable of being arranged according to priority and posteriority in respect of *time*, otherwise than by means of reference to priority and posteriority in respect of *place*. By *visible* signs, priority and posteriority in respect of time is no otherwise designated than by priority and posteriority in respect of place. By tangible signs they may be designated in either of these ways. To *tangible* signs the organs may be applied successively or all at once; but, if all at once, the number to be distinguished must not be large.

Methodized by means of priority and posteriority, objects must be disposed in such manner as to exhibit altogether some conspicuous and familiar figure.

Of all figures the most familiar is a right line. Objects disposed in such manner as to

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exhibit a right line are said to be disposed in a *row*.

In that case, if the position of the row be vertical, the article to which priority is ascribed will be that one which stands highest; if horizontal, that one which is nearest to the position from which it is designed to be viewed.

Methodized otherwise than by means of priority and posteriority, objects may be said to be methodized by aggregation, by simple and promiscuous aggregation, by enclosure,—by being shut up altogether, as it were, in a box.

To *physical* and *psychical* methodization this distinction is alike applicable.

Fifty guineas disposed in a row are methodized by means of succession; enclosed altogether in a *rouleau*—a sort of *extempore* paper-box—they are methodized by aggregation and enclosure, or inclusion.

Where the number is thus great, the superior convenience of the principle of aggregation and enclosure, as compared with the principle of *succession*, has been experienced by the gamesters whose invention it was; and of this convenience the existence is evidenced by their practice. Displayed in a row, such a number would have required *time* and labour for the counting of it, and more for the re-union, re-collection, and re-display, of it. Disposed in a *rouleau*, an aggregate, in the instance of which the number of its elementary parts is known, no counting, no collection, no re-display, is necessary.

In the psychical mode of methodization, arrangement of the names of the objects in a determinate figure, such as a line vertical or horizontal, is arrangement on the principle of lineal succession; arrangement of them under a common denomination, is arrangement on the principle of *aggregation* and *enclosure*. The name, the common denomination, is, as it were, the box, the *rouleau*, in which they are enclosed, and by which they are kept together.

Section III.

Methodization—its Uses—Purposes to which it is Applicable.

In the whole field of the art of Logic, so large is the portion occupied by the art of methodization,—so large, and, at the same time, so difficult to confine within any certain determinate limits, that the task of showing what it is that the art of method can do, is scarcely distinguishable from the task of showing what the art of Logic can itself do in all its totality.

Of the several distinguishable mental operations to which it belongs to the art of Logic to give direction and assistance, a list, supposed to be a complete one, has already been brought to view.*

In this list, methodization is but one article in a multitude. But, in comparison with all these its associates, such is its importance, that they are all of them but, as it were, so many instruments in its hands.

No one is there to which the art of Logic is not, in some way or other, capable of affording direction and assistance. But neither is there any one of them to which the art of conducting this same operation, termed *arrangement* or *methodization*, is not in like manner capable of affording direction and assistance.

If, in the style of Poetry and Rhetoric, Logic were to be termed a *queen*, methodization, method, might be termed her *prime-minister*.

Method is not the same thing as *invention*; for, from method, invention, it will be seen, as well as the other operations and their correspondent faculties, is capable of receiving direction and assistance; and a thing cannot be said to be an assistant to itself.

But method is itself the product of invention;—one of the most difficult works that it was ever employed in the execution of.

In the investigation of the uses capable of being made of this operation, (or, figuratively speaking, of this instrument,) for clearness of conception, it will be proper to be careful not to confound this operation with the aggregate of the operations of which Logic is capable of taking the direction; nor, as some appear to have done, with the art of *literary composition*, to whatsoever subject applied.† Co-acervation and successive exhibition,—these and these alone are, strictly and properly speaking, the two branches of the art of methodization.

Whatsoever assistance a different and distinguishable operation may be capable of receiving from methodization, it is not to methodization alone that the work performed by means of that other operation can, with propriety, be referred.

Great, for example, is the assistance which, from this source, invention has already drawn,—still greater, perhaps, the assistance which it may yet be capable of deriving. Yet, it is not by methodization alone that what has been performed in the way of invention has been performed. To chance and to analogy great, also, have been its debts: it has received much favour and assistance from this or that single and insulated analogy presented in some happy moment, by the hand of chance.

Functions applicable to any other branch of art and science.—In relation to art and science without distinction, *teaching*, *learning*, and *improving*—in relation to art, *practising*.

In relation to the exercise of these functions, method will, in every branch of art and science

* See chap. ii. sect. 4.

† See Sanderson's rules of method. [These will be found criticised at length in sect. xiii. For methodization, in relation to literary composition, see sect. xi.]

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be found capable of affording useful direction and eminent assistance.

Correctness and completeness in these intimately connected, though still distinguishable, qualities, will be found so many properties desirable in relation to the view taken, or the conception formed and retained, of the matter of any branch, whatsoever it be, of science.

Towards conferring on the conception these kindred qualities, be the science what it may, methodization, taken as above, in the strictest and narrowest sense of which the word is susceptible, will be found rendering indisputably valuable assistance.

In relation to every other branch of art, methodization considered in respect of its *successive-location* branch, indicates, as the object which, on the occasion of whatever is done or contrived in the practice of it, should always occupy the first place—the characteristic end in view.

An object correspondent to the end in view is constituted by *the properties* desirable on the part of the sort of *work*, whatsoever it be, which the art in question has for its *fruit*.

Section IV.

*Subjects of Methodization by Denomination—real Entities—fictitious Entities.**

Of methodization, in so far as performed by denomination, the subjects, the immediate subjects, are *names*, and nothing more. Things? Yes; but no otherwise than through the medium of their names.

It is only by means of *names*, viz. *simple* or *compound*, that things are susceptible of arrangement. Understand of arrangement in the *psychical* sense; in which sense, strictly speaking, it is only the ideas of the things in question that are the subjects of the arrangement, not the things themselves. Of *physical* arrangement, the subjects are the things themselves—the animals, or the plants, or the minerals disposed in a museum; of *psychical*, the *names*, and, through the names, the *ideas* of those several objects, viz. as disposed in a systematic work on the subject of the correspondent branch of Natural Philosophy—on the subject of Zoology, Botany, or Mineralogy.

If of this operation (viz. methodization by denomination) things were the only subjects, after names of *persons*, names there would be none, other than names of *things*; but of names that are *not* names of *things*, there are abundantly more than of names that are.

By *things*, bodies are here meant, portions of inanimate substance.

By this denomination, we are led to the distinction, the comprehensive and instructive distinction, between *real* entities and *fictitious* entities; or rather, between their respective *names*. Names of real entities are masses of proper names,—names of so many individual masses of matter; of *common* names,—names respectively of all such individual masses of matter as are of such or such a particular description, which by these names is indicated, or endeavoured to be indicated.

Words—viz. words employed to serve as names—being the only instruments by which, in the absence of the *things*, viz. the *substances* themselves, the ideas of them can be presented to the mind; hence, wheresoever a word is seen, which, to appearance, is employed in the character of a *name*, a natural and abundantly extensive consequence is,—a propensity and disposition to suppose the existence, the real existence, of a correspondent object,—of a correspondent thing,—of the thing of which it is the name,—of a thing to which it ministers in the character of a name.

Yielded to without a sufficiently attentive caution, this disposition is a frequent source of confusion,—of temporary confusion and perplexity; and not only so, but even of permanent error.

The class of objects here meant to be designated by the appellation of *names* of fictitious entities, require to be distinguished from names of *fabulous* entities; for shortness, say;—fictitious require to be distinguished from fabulous entities. To render whatsoever is said of them correctly and literally true, the idea of a *name* requires all along to be inserted, and the grammatical sentence composed and constructed in consequence.

Fabulous entities are either fabulous persons or fabulous things.

Fabulous entities, whether persons or things, are supposed material objects, of which the separate existence is capable of becoming a subject of belief, and of which, accordingly, the same sort of picture is capable of being drawn in and preserved in the mind, as of any really existent object.†

Of a *fabulous* object, whether person or thing, the idea, *i. e.* the *image* delineated in the mind by the name and accompanying description, may be just the same, whether a corresponding object had or had not been in existence, whether the object were a historical or a fabulous one.

Fictitious entities, viz. the objects for the

* This section is merely a fragment. The original MS. bears date 7th, 8th, and 9th August, 1814. Within a short time afterwards, a more complete view of the subject, viz. the classification of entities as real and fictitious, with the sub-divisions, seems to have opened on the author, and, leaving this analysis unfinished, he exhausted the subject in a separate essay called Ontology, and printed in this volume, p. 195, *et seq.* The greater part of the MS. of Ontology bears date September and October 1814.—*Ed.*

† Examples:—Gods of different dynasties,—kings, such as Brute and Fergus,—animals, such as dragons and chimæras,—countries, such as El Dorado,—seas, such as the Straits of Arrian,—fountains, such as the fountain of Jouvence.

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description of which, throughout the whole course of the present work, this appellative is meant to be employed, are such, of which, in a very ample proportion, the mention, and consequent fiction, requires to be introduced for the purpose of discourse; their names being employed in the same manner as names of substances are employed; hence the character in which they present themselves is that of so many names of substances. But these names of fictitious entities do not, as do the above-mentioned names of fabulous entities, raise up in the mind any correspondent images.

Follows a sort of commenced catalogue of these fictitious entities, of these names of fictitious entities; from which the common nature, in which, as above, they all participate, will presently become perceptible. Like the names of real, and those of fabulous, entities, all these words, it will be seen, are, in the language of grammarians, *noun-substantives*. All these fictitious entities are, accordingly, so many fictitious substances. The properties which, for the purposes of discourse, are attributed to them, are so many properties of all substances.

That the properties belonging to substances, to bodies in general, are attributed to them, —that they are spoken of, as if possessed of such properties, appears, from the *prepositions* by which the import of their respective names is put, in connexion with the import of the other words of which the sentence, the grammatical sentence, is composed.

Physical and *psychical*.—Under one or other of these two denominations may all fictitious entities be comprised.

Let us commence with physical:

I. *Motion,—motions*.—In the physical world, in the order of approach to real existence, next to *matter*, comes *motion*. But motion itself is spoken of as if it were *matter;* and in truth, because, in no other way,—such is the nature of language, and such is the nature of things,—in no other way could it have been spoken of.

A *ball*,—the ball called *the earth*, is said to be *in* motion. By this word *in*, what is it that is signified? *Answer*.—What is signified is, that *motion* is a *receptacle*, i. e. a hollow substance: and that in this hollow substance, the ball called the earth is lodged.

A motion, or the motion we say of a body. The body is one portion of matter, the motion is another, which proceeds of, that is *from* that substance.

Of names of motions, *i. e.* of names of species, or modifications of motion,—vast, not to say infinite, is the number and variety.

Genus generalissimum, is a term employed by the logicians of old, to indicate the name of any one of those aggregates which is not contained in any other aggregate that hath as yet received a name.

The idea of *motion* necessarily supposes that of a moving body,—a body which is in motion, or in which the motion is; necessarily supposes, *i. e.* without the one idea, at any rate, without the one image, the other cannot be entertained.

The idea of motion does not necessarily suppose that of another body, or the idea of the motion of another body, or the idea of another body, from which, or from the motion of which, the motion in question proceeds, or did proceed. The planets, that they are in motion, is matter of observation,—whence the motion took its rise, is matter of inference, or rather of vague conjecture. On the earth's surface, we see various bodies in the act of deriving motion from various *primum mobiles*. But the *primum mobile*, if any from which the earth itself derived the motion *in* which it is at present, what can we so much as conjecture in relation to it?

Where a motion of any kind is considered as having place, it is considered either with reference to some *person* who is regarded as the author of it, or without such reference. In the latter of these cases, motion, and nothing else, is the word employed: in the other case, *action* or *operation;* and in respect of it, the author is termed *agent* or *operator*.

II. *Quantity*.—Next to motion and motions, come quantity and quantities.

Quantity is applicable in the first place to *matter*, in the next place to *motion*.

Of and *in* are the prepositions in the company of which it is employed.

A quantity of ink is *in* the ink-glass which stands before me. Here *ink*, the real substance, is *one* substance; *quantity*, the *fictitious* substance, is another which is proceeding, or has proceeded, from ink, the real one.

The ink which is in the ink-glass, exists there *in* a certain quantity. Here *quantity* is a fictitious substance,—a fictitious receptacle, and in this receptacle the ink, the real substance, is spoken of as if it were lodged.

In this word *quantity*, may be seen the name of another genus generalissimum: another aggregate than which there is no other more capacious in the same nest of aggregates.

When *quantity* is considered, it may be considered either with or without regard to the relation between part and whole; and if considered, in one or other of these ways it cannot but be considered; the division is, therefore, an exhaustive one.

When quantity is considered, or at least, attempted to be considered, without regard to the relation between part and whole, it is considered with reference to *figure*. But if, without regard to the relation between part and whole, the idea of figure be indeed capable of being entertained, it is indeterminate and confused.

Quantity, according to the logicians of old, is either continuous or discrete. By continuous quantity, they mean, quantity considered with regard to figure, and without regard to the relation between part and whole. By *discrete*

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quantity, they mean, quantity considered with regard to the relation between part and whole, and without regard to figure.

If the three branches of mathematical discipline be separately considered,—continuous quantity is the subject of *geometry;* discrete quantity, the subject of *arithmetic* and *algebra.*

But it is only by *arithmetic,* that either in relation to any proposition appertaining to geometry, or in relation to any proposition in algebra, any clear conception can be obtained. Divide a circle into any number of parts, for instance, those called degrees, clear and distinct ideas are obtainable respecting the whole, and those or any other parts into which it is capable of being divided, or conceived to be divided. Refuse all such division, the best idea you can obtain of a circle, will have neither determinate form nor use.

III. *Quality.*—Quality is applicable to matter, to motion, and to quantity.

Of and *in* are the prepositions in the company of which it is employed.

Qualities of bodies, or say, portions of matter, animate or inanimate, are good and bad, viz. with reference to man's use.

Qualities of motion, *i. e.* of motions, are quick and slow, high and low, viz. with reference to any object taken as a standard, uninterrupted and interrupted, &c.

Qualities of quantities are great and little, determinate and indeterminate, *i. e.* with reference to man's knowledge of them, or conception concerning them.

Qualities of quantities, are qualities either of bodies, *i. e.* portions of matter, or of portions of space, considered with reference to quantity to the exclusion of every other quality.

Property is, in one of the senses of the word, synonymous, or nearly so, to quality.

As we speak of the *quality* of a *quantity,* so do we of the *quantity* of a *quality.*

When men speak of the quantity of a quality, instead of saying quantity of a quality, they commonly say a degree,—in a high degree, in a low degree,—instead of high, we say sometimes, in a great degree; instead of low, in a small degree.

Degree, in French *degré,* is from the Latin *gradus,* a step or stair; that which is said to be in a *high* degree, is considered as situated upon the upper steps of a staircase. *Scale,* in French *Echelle,* is from the Latin *Scala,* a ladder; whether the word be staircase or ladder, the image is to the purpose here in question much the same.

IV. *Form* or *Figure.*—No mass of matter is without *form;* no individual mass of matter but has its boundary lines; and by the magnitude of those lines, and their position with reference to one another, the *form,* the *figure* of the mass is constituted and determined.

But neither is any portion of *space* without its form. Form or figure,* or say, to possess form, or figure is, therefore, a property or quality of space as well as of matter; it is a property common to matter and space.

A mass of matter may have throughout for its bounds or limits, either another mass, or other masses, of matter, or a portion of space, or in some parts *matter,* in others *space.*

A portion of space cannot, in any part, have for its bounds anything but matter.

A mass of matter is said to exist in a certain form; to be *of* a certain form or figure; to be changed *from* one form *into,* or to, another.

V. *Relation.*—In so far as any two objects are regarded by the mind at the same time, the mind, for a greater or less length of time, passing from the one to the other, by this transition, a fictitious entity termed *Relation,*—a relation, is considered as produced.

The one of these objects,—*either* of these objects is said to *bear* a relation to the other.

Between the two objects, a relation is said to exist, or to have place.

The time during which the two objects are regarded, or kept under consideration, is, as above, for shortness, spoken of as the same time. It should seem, however, that, with exactly the same degree of attention, objects more than one cannot be regarded, considered, examined, surveyed, at exactly the same instant, or smallest measurable portion of time; but that, on the occasion, and for the purpose of comparison, the mind is continually passing and repassing from the one to the other, and back again, *i. e.* vibrating, viz. after the manner of the pendulum of a clock.

This motion, viz. *vibration,* (the motion acquired by an elastic *cylinder* or *prism,* in which the length is the prevalent dimension, on its being suddenly dragged, impelled, or drawn, and let go in a direction other than that of its length,) being the simplest of all recurrent motions, is the sort of motion best suited, or rather is the only sort of motion in any degree at all suited to the purpose of *comparison.*

Hence it seems to be that, in speaking of a *relation,* any number of objects greater than two, are not brought to view; for, on this occasion, the preposition employed is always *between,* never *among.* By the preposition *between,* the number of the objects in question is restricted to *two;* restricted universally and uncontrovertibly.

Hence it is that, in methodical division, the *bifurcate* mode is the only one that is completely satisfactory.

Section V.

Of the relation between Genus and Species.

From methodization on the principle of ag-

* Figure from *fingere,* to fashion, as a potter does his clay. It has for its conjugates, besides *figura, figulus,* perhaps the English word *finger;* the fingers being the parts of the human frame principally employed in fashioning, in giving form to masses of matter,—to each its intended figure.

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gregation, follows the sort of relation that has place between genus and species; the relation, by means of which aggregates of different dimensions are lodged, with reference to one another, in the order called subalternation or introsusception.

It is from this order,—that is, from the practice of ranging ideas in this order by means of correspondent denomination, that the logical operations, called logical *division* and logical *definition*, took their rise.

The order in which, by the Aristotelians, the component elements of a system of subalternation are exhibited is the reverse of the historical order in which they made their appearance. By these logicians an immense aggregate is held up to view, the most extensive of which they were capable of conveying or framing a conception: that aggregate is represented as divided, or divisible, into other aggregates; these again, each of them, into others, and so on, till at last comes the last link in this sort of chain;—a link consisting of an aggregate which, not having within it any other aggregates, is composed wholly of individuals, which individuals must, if those spiritual substances are excepted, which, on the occasion, are commonly introduced, of course, consist of portions of matter, being natural bodies, or parts or portions of such bodies.

This order, according to which (the principle of methodization being, in this respect, the principle of priority and posteriority) the object of largest dimension, is that which presents itself in the first instance, is called the analytic order, or the order of *analysis;* analysis from a Greek word, which signifies to melt or break down into a number of parts, an object considered in the character of a whole.

The reverse of this is the order of priority, as chalked out by the hand of Nature. *Sense* is the fountain from which all ideas take their rise. To *sense* no objects but individual ones ever present themselves. The names first in use must, accordingly, have, all of them, been of the sort of names called *proper* names,—names invented and employed for the designation of individual objects.

From the invention of proper names to the invention of common names, must have been a very wide and ample step: long may the race have continued before any instance of its being taken actually occurred.

As often as any separation to the eye happened to take place, the first man, desiring the presence of the first woman, would have need to lift up his voice to give intimation to her of such his desire; the sound thus uttered by him would, if, to any degree of constancy, the same sound were repeated, become her name. In the same manner, from the first woman, would the first man receive his name. In the same manner would the dog,—the first dog, between which and any part of the human species any intercourse established itself,—receive, and, at the same time, learn his name.

Had Adam and Eve remained childless, the human species would never have received, at least from human lips, a common name. On that supposition, himself and Eve would have been all the human beings whom Adam could have had need to speak of; for any common name, including these two, still less for a common name, including other human beings in an indefinite number, could either of these, our first parents, have had any use.

In the language of the modern Hebrews, and even in the language of the Hebrew Scriptures, the same word which is employed to designate the earliest individual of the human species, is employed to designate the species likewise. A name employed constantly by Adam for designating himself, to the exclusion of Eve, could never have been employed, or pitched upon, for designating both of them together.

It was taking a wide step the forming in this way an aggregate denomination, and with it an aggregate idea, in which the component individuals were determinate. It was another, and still wider step, the forming such a denomination of this sort, in which the component individuals were all, or any of them, indeterminate.

Whether for an aggregate denomination the component individuals of which were determinate, any effectual demand presented itself, antecedently to a like demand for an aggregate denomination, of which the component individuals were indeterminate, would naturally depend in good measure upon the number of individuals naturally susceptible of the same denomination that happened, at the same time, to come within the cognizance of the interlocutors. So long as the number of his sheep was small, Abel would have no need of finding for them an aggregate, a specific denomination;—the larger and larger it became, the more and more urgent would be the demand for an all-comprehensive name.

Of an aggregate composed of determinate individuals, the idea and denomination being thus once formed, it would not be long before the same denomination would have been found capable of serving for the designation of an aggregate, composed of individuals, some, or all of which, were indeterminate;—between individual and individual the less wide to any practical purpose were the difference, the sooner would the transition from the employment of an aggregate denomination of the more obvious nature to an aggregate denomination of the less obvious nature be made.

Under the direction of an attentive observer, geography serves, in some sort, for supplying the gaps left by history. The description of nations exhibiting themselves on different levels in the scale of improvement, or, to speak more precisely, having before them fields of observation of different extent, serve, when put together, to exhibit a simultaneous view

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of no inconsiderable portion of the history of the human race.

In this view, the most curious, and to the purpose of instruction the most valuable, chapter in this sort of contemporary history, would be composed of the vocabulary, if a complete one could be obtained, of a tribe, the seat of which, supposing it have all along been there, was in the narrowest field as yet known, in a small and thinly inhabited island, or cluster of islands, destitute of communication with any other inhabited portion of the globe.

At Otaheite, at the time of the discovery of that group of islands, dogs and hogs being, unless rats were an exception, the only quadrupeds with which the human part of its inhabitants were acquainted, they had, we may be well assured, no denomination answering in point of extent to our word quadruped, still less to our word *animal*. When to their astonished eyes a horse first presented itself, it was classed by them with dogs,—it was designated among them by the same common and aggregating name. The hog species was as familiar to them as the dog; but from its being the name of dog, and not that of hog, that by them was bestowed upon the first seen horse, it appears that, in their eyes, it was to the dog, and not to the hog species, that the horse bore the closest resemblance.

Section VI.

Of the Porphyrian Tree.

The process, or course, by which setting out from individuals, and these *indeterminate*, men arrived at that level in the scale at which are seated the most extensive aggregates, has received the name of *generalization*; it has *division*, logical or psychical *division*, for its converse.

At this stage of the inquiry, the justly celebrated logical instrument, called the Porphyrian tree, presents its claim for notice.* It took this name from its inventor, Porphyrius, a Greek, who, four centuries after the days of Aristotle, enlisted himself under his banners as one of his disciples.

In the track of generalization such had, among that ingenious people, no one knows how long before the days of Aristotle, been the progress of generalization, that he found rising, one above another, in that scale, words in the Greek language, employed as the names of the following aggregates: 1, man;—2, animal;—3, living thing;—4, body;—5, substance.

In addition to those objects, the existence of which is made known to sense, for designating other objects, the idea of which is presented to us only by abstraction, the work of imagination, while their existence is pointed out to us by inference, he found, already in use, a word corresponding to our word substance.

For exhibiting to the senses the relation between the objects standing on different levels of the scale thus composed, he employed as an *emblem* the figure of a tree.

At the bottom, in the place of, and as serving to constitute the *trunk*, with its continuation, the *root*, he stationed the most capacious of all these aggregates,—the half-corporeal, half-ideal name, *substance*. Within the compass of this most capacious aggregate, he beheld two lesser aggregates, constituting the nearest and lowest branches of the tree; one the aggregate composed of such substances as are of a corporeal, the other of such as are of an incorporeal nature;—those of a corporeal, *i. e.* bodily nature, were, in one word, *bodies*;—those of an incorporeal nature were, in one word, *spirits*.

Taking in hand the aggregate composed of bodies, he observed that some had *life* in them, others not,—by which word life, he designated as well the sort of life ascribed to *plants*, viz. *vegetable* life, as the sort of life ascribed to animals, viz. animal life. In these he found two ulterior branches for the corporeal branch of his ideal trunk and root; one branch served for containing such bodies as had life in them,—the other such as had no life in them.

Leaving the vegetable world, as before he had left the incorporeal world, undivided, he performed the operation of division in the same way with the animal world, as he had proceeded with the corporeal;—included in this aggregate, he observed two ulterior aggregates, one in which were included all animals endowed with reason, viz. human creatures,—in the other, all animals not endowed with that transcendant gift, which last, without further division or distinction, he drove together in one flock under the name of *brutes*;—and with these rational beings he peopled the one, as with the irrational ones the other of the two extreme branches of this emblematical and instructive tree.

The branch to which he saw the brutes adhering, he left as he had left the incorporeal, and, within it, the vegetable world, unnoticed as well as undivided. Brutes being but brutes, were not worth distinguishing from each other, in a word, on no account had they any further claim to notice.

As to rational creatures, they were human beings, and, in the largest sense of the word, *man*, they were *men*;—these were worth distinguishing. Accordingly, from this extreme branch, arose a twig representing the aggregate composed of individuals, and upon this distinguished by their several denominations, which, they being individuals, were the sort of names called proper names, sat perched as the representatives of their fellow beings, some of the most distinguished of his contemporaries, and their predecessors.

One defect, one but too discernible, had, unfortunately, this emblematic vegetable.

To the parts of which it is composed, the

* Vide supra, p. 110.

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order of succession which it assigns in respect of priority and posteriority, is not the real order in which they came into existence, but the reverse of it.

For those parts of the system which possess, in the largest measure, the nature of substance, viz. body, in the only shape in which it comes within the cognizance of our senses, the station should be on *terra firmâ;* but in the tree of Porphyrius, its place is aloft in the high and aerial region.

There it is that the illustrious persons taken for examples of individuals, there it is that the Socrates', the Plato's, and the Aristotle's, are seen quivering upon the extremest twigs. The parts from which, by abstraction, the properties of matter have, one after another, been drawn off till nothing but a bubble remains, to these is appropriated the name of substance; these, in the altitude of the system, occupy that place which, in a real tree, is in, or in immediate contiguity with, the earth.

Take a small tree as it grows in a garden-pot, continue it in its natural position, it represents not the tree of Porphyrius, but the reverse of it,—turn it topsy-turvy, the stem, the bottom of the trunk, this occupies the highest place, the remotest and slenderest branches the lowest,—and then it is, if at all, that it becomes the correct emblem and faithful portraiture of the tree of Porphyrius.

Section VII.

Of Scales of, or in, Logical Subalternation.

In the whole field of human thought and action, so many aggregates as we have occasion to form and to distinguish in the character of *genera generalissima*, so many are the different scales of logical subalternation.

In the aggregate which has *entity* for its name, all other imaginable aggregates are comprehended.

Entities are either physical or psychical.

Physical are either real or fictitious.

Psychical, again, are either real or fictitious; real psychical are either present to sense, perceptive, *i. e.* impressions; or present to memory, *i. e.* ideas. Ideas are either *single*, or say concrete, simple, or particular—formed without abstraction; or general, *i. e.* aggregate, formed by abstraction.

Psychical fictitious entities may be *distinguished* (i. e. the aggregate composed of the entities termed *psychical fictitious entities* may be *divided*) according to the faculties to which they respectively bear relation.*

Aggregates.—Any two aggregates, which are completely included either of them within the other, stand with reference to each other in the relation of *logical subalternation*, and with reference to each other may be said to be *commensurable*. Divide the *larger* of the two, you may sooner or later divide it into *parts*, one of which will be the smaller aggregate.

Aggregates, no one of which is in any part included within the other, may, in like manner, be said to be *incommensurable*.

Any number of aggregates which are thus commensurable may be considered as belonging to, *constituting*, and may be said to constitute one *scale*, and to *belong* to one and the same *scale*. And thus we have *scales* of aggregates, and scales of logical subalternation.

Instead of *scales of aggregates*, we may also, in so far as the convenience of discourse may be found to require it, say *nestr*† of aggregates; and speak of two or more aggregates as belonging to the same *nest*, or belonging to different nests.

Aggregates belonging to the same scale of logical subalternation are, moreover, said to be arranged, with reference to one another, in *systematic* order.

Of two aggregates belonging to the same scale, the larger may, with reference to the smaller, be termed *superordinate;* the smaller, with reference to the larger *subordinate*.

In this way, the two only modes or principles of methodization are employed together: the one which proceeds on the principle of succession, or priority and posteriority, being in the character of a type or emblem employed to represent that which proceeds on the principle of *aggregation*.

In all scales of logical subalternation, there are two fixed points or levels; viz. that at or on which individuals stand, *i. e.* the level of individuality or lowest level, and that at or on which the genus generalissimum, or most extensive and all-comprehensive aggregate stands, *i. e.* the highest level.

Between these two fixed points or degrees, other degrees, in any number, are wont to be interposed, according to the exigency of the case, as determined by the nature of the scale, and the use made of the aggregates or aggregate terms of which it is composed, according to the nature of the art and science to the cognizance of which it has regard.

For the purpose of scientific arrangement, physical entities are commonly considered as composed of three aggregates, which, or their respective fields, are commonly spoken of by the appellation of *kingdoms:* viz. the animal, the vegetable, and the mineral; the individuals belonging to the mineral kingdom, being neither sensitive nor so much as vital; those belonging to the vegetable kingdom, vital but not sensitive; those belonging to the animal kingdom, *vivacious* and *sensitive*.

* Ethical will be those belonging to the pathetically or pathecally passive faculty. The ethical fictitious entities will be obligation, right, power, &c.; distinguishable according to the *sanction* from which the good and evil is considered as flowing. See chap. ii. sect. v., p. 229.—Faculties to which logic gives direction and assistance.

† Chemists and apothecaries have their nests of boxes.

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In each of these kingdoms, between the two points or levels, viz. the highest and the lowest, degrees are placed in any number according to the demand constituted by the state and condition of the science in respect of cultivation and advancement.

For the formation and designation of these degrees, (the name of the kingdom constituting the name of the highest aggregate,) the course taken has usually been to begin with the highest, *i. e.* the most capacious receptacle.

From this, in order to obtain lesser and inferior aggregates, stationed in so many lower levels, it became necessary to have recourse to division: division, say psychical or logical division, was the operation necessarily employed.

In every branch of art and science, the use of *definition* is universally felt and acknowledged. But to *definition*, at any rate in the usual sense of the word, division, psychical or logical division, is a necessary preliminary or accompaniment. In that sense, by definition is meant the indication of a larger aggregate, in which the aggregate in question (the aggregate for the name of which definition is required) is comprised; together with the indication of some property or properties by which the aggregate in question stands distinguished from whatsoever other aggregates are likewise comprised under that same larger aggregate, distinguished, to wit, in this manner: viz. that the property so indicated does appertain to the lesser aggregate in question, but does not appertain to those other lesser aggregates from which it is required to be distinguished.

Take, for example, this definition of the species *man*: man is a rational *animal*. By the word *animal*, indication is given of the larger aggregate, within which the aggregate in question, the aggregate indicated by the word *man*, is comprehended. By the word *rational* is indicated a quality or property which is considered as appertaining at birth at least, and abstraction, made of particular accidents, to all individuals comprehended within the denomination of that lesser aggregate in question, viz. man, and not appertaining to any other individuals comprised within the name of the aggregate *animal*.

But for this purpose, and on this occasion, and if not antecedently, by this means, here is a larger aggregate psychically or logically divided, divided into two lesser and component aggregates: to the one of these two aggregates a name, viz., the name *man*, is given; to the remaining aggregate, no name is in and by this same operation given—it is left without a name.*

Thus intimately connected are the three logical operations subservient to instructive intercourse, viz. *aggregative arrangement*, *division*, and definition. Without previous aggregate arrangement there would be nothing to divide; without division there would be no definition, at least no definition in which the genus or aggregate referred to, and employed for the purpose of explanation or instruction, were of any less dimensions than the *genus generalissimum*, the box in which all the other boxes belonging to that nest are included.

Section VIII.

Of Subalternation and Psychical Division and Definition as Applied or Applicable to the three Physical Kingdoms: viz. 1. *Animal*; 2. *Vegetable*; 3. *Mineral*.

Since the revival of letters, *i. e.* of intellectual culture, the greater the length of time that has elapsed, the greater the quantity of time, and thence the greater the number of the persons that have been employed in the observation and examination of the subjects of these three portions of the intellectual world.

In each part, the number of these objects, of these sorts of objects, all different and distinguishable from each other, has received prodigious increase: to reduce them to masses of a comprehensible manageable bulk, means have necessarily been looked out for of breaking down each of these all-comprehensive aggregates into aggregates of less extent, these again into others, and so on downwards, until under the name of species a range of aggregates were established, all situate upon the same level; no one of them containing any other aggregates, every one of them having for its contents individuals, and nothing but individuals; for its contents individuals, and those not in any number greater than what might, without confusion, and with sufficient observation of their several points of agreement and difference, be contemplated by a scrutinizing eye and an attentive mind.

The labour, whatsoever it be, that was, or is, capable of being bestowed in this direction, viz. in the way of methodization upon the field of physical science, had, and has, for its sole immediate object, the solution of this one problem, viz.—in the instance of every individual object, belonging to every one of the three kingdoms—of every such object, in the state in which it is presented to man's view by the hand of Nature, to set upon it, by verbal description only, and without seeing it, a mark of distinction,

* Thus by every definition, *per genus et differentiam*, *bifurcate* division is made; the greater aggregate is divided into two *forks* or *arms*. But of that one of the arms to which a name is given, a property, and that a characteristic one, is brought to view; it is thereby placed in the light; whereas, of that which constitutes the other arm no such property is brought to view,—it is left in the dark.

In a bifurcate division, expressed in the only form in which it is at the same time shown to be *exhaustive*, viz. in the contradictional, both arms are placed as nearly as may be in an equally strong light; though of the two arms that which is expressed *positively*, and that which is expressed negatively, the light in which the former is thereby expressed, will naturally be in general the clearer, and thence the stronger.

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such whereby it may be effectually distinguished from every other such individual object, except such as are possessed of exactly the same properties, or at least, of properties so nearly the same, as to be capable of being employed instead of it, without practical inconvenience.

Long before the stock of physical knowledge had received any such considerable accessions, the accomplishment of the solution of this problem, with no other help than had been furnished by the language of Aristotle's logic, would have been rendered impracticable.

The accomplishment of this problem was far indeed from being a work of mere barren speculation; practice in every line of art, and above all, in the medical, the most useful of all arts, has ever been, in no small degree, dependent upon it. On such or such an occasion, an individual object,—say, an individual plant,—has been found possessed of certain serviceable properties,—has afforded to a man relief under disease. The plant employed, the disease appears to be cured. But ere long, the disease returns; the health-restoring plant is all consumed; another plant, presenting the same outward appearance, might be expected to operate with the same inward efficacy,—to be productive of the same happy effect. Discovery is accordingly made of another, presenting to a first view the same appearance,—employed in the same manner as the first, instead of banishing the disease, it exasperates it. Upon a sufficiently close observation, the two plants might have been seen to present, even in their outward configuration, very material discernible differences,—differences from which, correspondent differences in respect of their effects on the human body, would have been inferred, or, at least, the supposition of their absolute identity disproved and banished. But supposing even these outward differences discerned, and the salutary inference deduced, how minute and momentary would be the benefit. The one individual person is, for the moment at least, put sufficiently upon his guard against the mischief; but even himself, perhaps, on another occasion, all others upon all occasions, remain exposed to it.

In a degree more or less serious, the like danger may be seen extending itself over the whole field of the three kingdoms. For the obviating this danger, the nature of the case affords no other means, than the giving to the solution of the above-mentioned problem, an equal and coincident extent.

In these latter days, so far as concerns the physical world, comparatively speaking, the grand problem wants not much of being accomplished. But to the accomplishment of it, the stock of methodical terms, possessed by the Aristotelians, wanted much of being sufficient. *Species* and *genus*, with the addition of a term floating in the clouds at an infinite and indeterminable distance above these other two, composed the whole of it.

1. System of nature, the name of the all-comprehensive physical aggregate; *that* divided into the three kingdoms. 2. Each kingdom divided into *classes*. 3. These into *orders*. 4. Orders divided into *divisions;* and, 5. perhaps these into *sub-divisions;* by this list of terms is shown the addition made by Linnæus.

Section IX.

Division of Aggregates—Linnæan Nomenclature of the Sub-divisions.

In relation to the names employed for the designation of the aggregates of different dimensions, which are regularly the result of the successive divisions performed in a system of logical subalternation, what is to be wished is, that in the instance of each, intimation should be given, in the first place, of the number of *nests*, or *ranks of aggregates*, contained in the system. Secondly; of the rank occupied by the aggregate of which the word in question is the name.

In such a system, the most capacious of all the aggregates, viz. that in which all the others are contained, will occupy the *first* rank; those which constitute the result of the first act of division to which it is subjected, the *second* rank; those which are the result of the division, to which the results of the first division are subjected, the *third* rank.

The number of *nests*, or *ranks*, will be *one* more than the number of the *acts of division*, to which the aggregate, which occupies the most capacious, highest, and first rank, has been subjected.

In the system of Linnæus, if the contents of the whole earth be taken for the first, highest, and all-comprehensive aggregate, the number of nests or ranks of subordinate aggregates, constituting the result of the successive divisions to which it has been subjected, will, when added to that first aggregate, the original dividend be found to be *seven;* the number of these successive acts of division being *six*, viz. 1. kingdom; 2. classes; 3. orders; 4. genera; 5. species; 6. varieties.

For further explanation, taking the class for the prime dividend, to this prime dividend he applies, as synonymous to it, and explanatory of it, the compound term, *genus summum*, (highest genus;) to *ordo*, order, the compound term *genus intermedium;* to *genus*, (kind,) the compound term *genus proximum;* to *species*, (species,) nothing but that same appellative; to *varietas*, (variety,) the term *individuum*.

1. Unfortunately, in this illustration, the prime dividend, or the all-comprehensive aggregate is omitted; so, also, the result of the first act of division, the three physical kingdoms; what is done for the purpose of illustration, consists, therefore, in taking the term *genus*, and with two different epithets or adjuncts, necessarily Latin, employed for distinction's sake, applying it as synonymous in the first place to class, and then again to *ordo*.

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2. What is still more unfortunate, in this additional tree, designed for the illustration of the others, he places *individuum* on the same level with *varietas*, as if the two appellatives were with relation to one another *synonymous* and interconvertibly employable; whereas, *varietas*, variety, is the name of an aggregate, and in that character employed even by himself.

3. For further illustration, he gives two other nests of aggregates,—the one constituted by the divisions to which the territory of a political state has been found subjected; the other, by the divisions to which the military establishment has been found subjected.

Unfortunately, in both these instances, the number of these successive acts of division and subdivision being altogether arbitrary, has, in different political states, and in the same political state at different times, been different; and, moreover, as to the denominations which, for the designation of them, are employed by him, the language in which this work of his is written, being the Latin language, it is from that language that they were all of them, unfortunately deduced. But in neither of those instances does the Latin language afford an adequate number of names of aggregates, the relation of which to each other, in respect of amplitude and capacity, were, or are, found by him determinate.

The geographical or topographical aggregates which he employs, and which are constituted by portions of the earth's surface, with their divisions and subdivisions, are, 1. *Provinciæ*, put as correspondent to *classis* and *genus summum*. 2. *Territoria*, put as correspondent to *ordo* and *genus intermedium*. 3. *Paræciæ*, put as correspondent to *genus* and *genus proximum*. 4. *Pagi*, put as correspondent to *species*. 5. *Domicilium*, put as correspondent to *varietas*, and to *individuum*.

The political, or political official, names of aggregates which he employs are, 1. *Legiones*, employed as correspondent to *classis*, and to *genus summum*, and to *provinciæ*; 2. *Cohortes*, employed as correspondent to *ordo*, and to *genus intermedium*, and to *territoria*; 3. *Manipuli*, as correspondent to *genus*, and *genus proximum*, and to paræciæ; 4. *Contubernia*, to *species*, and to *pagi*; 5. *Miles*, to *varietas*, to *individuum*, and to *domicilium*.

4. Another imperfection: varietas, may, without impropriety, be employed as the name of an aggregate, and in that character is accordingly, in this work of his, employed by himself;* so, possibly with the help of explanation, might domicilium, for example, if considered as an aggregate, having individual chambers for its constituent parts; but by no explanation can individuum be rendered a fit denomination for an *aggregate*; by no explanation can it be rendered a fit denomination for anything but an individual; and so in the case of *miles*.

Section X.

Rules of Methodization as applied to Objects; viz. for the performance of Methodization by successive exhibition.

Rule I. *Independentia priora.*—When two words present themselves together for exposition, examine and observe whether there be not between them such a relation, that one of them, and that one alone, is capable of being explained, while the other remains unexplained and not understood; if so, be careful that the explanation given of that one shall precede the explanation given of the other.

Reason 1.—Brought to view before the explanation, the as yet unexplained article is brought to view without explanation; but if, without explanation, it can be understood, the explanation is of no use.

Reason 2.—Where of that article, in the explanation of which the mention of the other is requisite, the explanation given is put first; here will be an object more or less unknown and obscure, perpetually floating about in the mind, and intercepting whatsoever light in the course of the explanation might, from any other quarter, have been thrown upon the object to be explained; and between the two, the attention will be distracted, and no clear view will be taken of either of them.

Rule II.—*Qualis ab incepto procedat lucidus ordo.* Unless for special reason, in whatsoever order a list of articles announced as about to be treated of, has, in the first instance, been brought to view, preserve that same order in the treating of them. Otherwise, thus:

When in the character of so many articles about to be treated of, a list of articles has been brought to view, be careful that, unless for special reason to the contrary, the order in which they are treated of be all along the same as that in which, as above, they were for the first time brought to view. To borrow a phrase from the Geometricians, the articles,

* In more points of view than one are the characters of original genius exhibited in the work of this illustrious Swede. Not less peculiar to him than his system was his style. Compressed and elliptical in the extreme, the picture which it exhibits is rather that of an immense bundle of loose hints than that of a continued discourse. Great, indeed, is the excellence which it accordingly exhibits in the articles of compressedness and impressiveness; but far, indeed, are these excellencies from being so much clear gain—being paid for, and that at no low rate, by imperfections, not only in respect of facility of intellection, but in respect of *clearness*, and thence, as hath been seen, even in respect of correctness. He may be styled the *Tacitus* of physics. In so far as concerns the aggregate composed of the universality of bodies considered in their natural state, the classification and correspondent nomenclature invented and established by him, will, it is believed, be found tolerably fit for practical purposes.

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once laid down, they should throughout *be alike situated.*

Reason 1.—When the same order is thus uniformly observed, the relations by which it was suggested are repeatedly and continually held up to view, and thereby imprinted more and more strongly and firmly on the memory.

2. While you thus preserve the same order, the view which at the outset you took of the subject and the place suggested by that view, appears to have been continually approved of and persevered in. On the other hand, if in the order any change takes place, the change will be apt to be regarded as a sign that the view first taken of the subject has been regarded as incongruous; that a plan, more or less different, has taken place of that which at first was meant to be pursued; and that, accordingly, your conceptions of the subject were indistinct and fluctuating.

3. Another supposition may be,—that instead of bearing in mind the order you had assigned, and purposely changing them, so it is that in the subsequent stage this order has escaped your memory.

By whatsoever advantage it was that the order of precedence first employed was suggested, this advantage will, in proportion to the degree in which that first appointed order is departed from, be lost.

Rule III.—Include, in the same receptacle, those objects alone which are designed to receive the same destination. Shillings and half-pence should not be put up into a rouleau of guineas.*

Section XI.

Of Methodization, as applied to the Materials or Parts of a Discourse or Literary Composition.

In any literary composition or protracted mass of discourse, such as is the whole, such must of course be the parts.

That which all discourses have in common is the different species of words called the *parts of speech*, and the sentences in different forms composed of those parts of speech, and the paragraphs composed of those sentences.

If, besides these parts, there were any others that belonged to all discourses in common with one another, *methodization* would be an operation susceptible of application to the parts of a discourse, as well as to the entities which are the parts or elements of an aggregate considered as such. But, to discourses taken in the lump there belong no such common parts.

But a set of incidents to which discourse of all kinds stands exposed, are certain vices or imperfections which, in every shape, it is liable to labour under.

1. Superfluity by irrelevancy; 2. Superfluity by repetition *in terminis;* 3. Superfluity by virtual repetition; 4. Verbosity; 5. Scantiness; 6. Inconsistency, including self-contradiction; 7. Ambiguity; 8. Obscurity; 9. Confusedness; 10. Desultoriness. By these appellations are designated so many imperfections by which every modification and mass of discourse is liable to be stained.

Many are the cases in which a suggestion, which, in the character of a precept of instruction or information would be generally nugatory, may yet, in the character of a memento, not only have, but be generally acknowledged to have a real usefulness.

In one single sentence might be contained a memento adequate to the purpose of putting the reader upon his guard, in so far as by mementos inserted in a book men can be put sufficiently upon their guard against the falling into any of these vices.

If, for separate paragraphs, in number equal to that of the vices, there can be any adequate demand, the purpose will be the subjoining, in each instance, something by way of explanation or example.

Repetition in terms as well as import, or say *literal*, repetition, and repetition in import alone, and not in terms, or say virtual, repetition. The distinction thus expressed may, it is believed, be found to have its use.

Repetition in terms is a vice, into the practice of which a writer, especially at this time of day, is not, it may naturally be imagined, in any great danger of falling.

The most extraordinary example, it is believed, that ever was in print or even in manuscript, is that which is exhibited in the Koran. In the compass of a moderate-sized octavo volume the same proposition, and that a nonsensical one, is repeated several hundred times.

Repetition in import is a vice that may be practised by a man to any extent, and without his being aware of it; and great, accordingly, is the extent to which the practice of it may be seen to be carried.

Scantiness is an imputation which, even in a case that affords just ground for it, does not very easily find a determinate seat.

It is only in so far as a writer fails in the performance of what he has actually undertaken to perform, that any deficiency in the quantity of matter delivered by him can be charged upon his discourse in any such character as that of an imperfection or a vice.

But, if having expressedly or impliedly undertaken to cover by his discourse the whole of the field which he has taken in hand, he leaves untouched any part of it that is known to have been already touched upon by any other writer, he must not expect to be holden altogether guiltless by any person by whom the deficiency has been perceived.†

* Here the MS. suddenly breaks off.—*Ed.*

† Of a deficiency to which the reproach of scantiness can scarcely be regarded as inapplicable, remarkable is the example afforded in the late Dr

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In any list of articles—that list being expressly or impliedly given as a complete one—if any proposition, article or articles, that have a title to be considered as belonging to it, be omitted, the reproach of scantiness will naturally be more readily and clearly seen to have been incurred, than where the spots omitted are such as correspond to so many longer and larger members or portions of the discourse.*

Section XII.

Of Methodization—its Application to the Assistance of the Faculties of the Mind.

1. *Of the Perceptive and Conceptive Faculties.*

Example: Numbers in general, as disposed in the numeration table, in which numbers as many as ever can be wanted for any purpose, follow one another in an endless succession, having all along, at every step, a *unit* or number one for their common difference. The order in which they follow one another is an example of the *Regula Antecessionis et consequentionis.*

To form an idea of the use of the order thus given to them, suppose any series of numbers, though it were no more than a hundred, instead of following one another in the order exhibited in the Numeration Table, following one another in an order determined by lot, how incomprehensible a labyrinth would be the mass composed of those numbers!—how impracticable a task the obtaining any tolerable acquaintance with an art now so simple as that of common arithmetic!

Every case of systematical arrangement performed by division and subdivision of aggregates or fictitious masses formed by abstraction, is an exemplification of methodization performed in the aggregative or co-acervative mode.

2. *Of the Memory or Psychically Retentive and Recollective Faculty.*

The applying of this operation in the special view and design of affording assistance to the memory by expedients directed expressly to that object, has been taken for the end in view of an appropriate branch of art, termed, from the Greek *mnemonics*, or the *mnemonic art.*

But language itself, language the indispensable instrument of all the arts and all the sciences, is itself an exemplification of the application of the power of method to the assistance of the memory; it is by means of the several signs of which language is composed, *i. e.* of words taken singly or in conjunction or composition, that the ideas respectively signified by them are lodged in, and, upon occasion, called up from that fictitious receptacle the memory.

3. *Of the Inventive Faculty.*

Invention is an operation which has for its results every branch of art, and every science which, at the point of time in question, is in existence.

But, in some instances, the accession thus made to the existing fund of art and science has been the result of design steadily directed to the acquisition of it. In others, it has been the fruit of accident; design, attention, and labour not having had any part at all in the production of it, or having taken no other part than what consisted in the endeavour to turn to account, and, as it were, to give ripeness to, the fruit which accident had been the first to bring to view.

For facilitating the assistance capable of being rendered by methodization to the art of invention, viz. of invention by design, of purposed invention, such rules as have presented themselves will be found in the chapter on *invention.*†

4. *Of the Imaginative Faculty.*

That, without impropriety, every instance of abstraction, and every instance of invention, are capable of being referred to the imaginative faculty, has been seen already.

But, where the subject of discourse is a work styled a *work of imagination*, what is usually meant is a fictitious state of things or assemblage of events, purely and commonly avowedly fictitious, put together, and commonly sent abroad for the purpose of affording what is called amusement; amusement—viz. an assemblage of pleasures of a particular sort, commonly termed pleasures of the imagination.

The art, in the practice of which the powers of the imaginative faculty are employed and directed to that end, is termed the art of Poetry.

Campbell's work entitled "*The Philosophy of Rhetoric.*"

According to him, b. ii. c. v., vol. ii. p. 4. "Besides purity, which (he says) is a quality entirely grammatical, the five, [and by the article *the* he thus undertakes for the completeness of his list,] the five simple and original qualities of style, [which he doubtless means, but does not say, are qualities *desirable* in style, for assuredly they are not found in every man's style,] of style, considered as an object of the understanding, the imagination, the passions, and the ear, are *perspicuity*, *vivacity*, *elegance*, *animation*, and *music*,"—meaning by *music*, *musicalness*. To the subject of *perspicuity* the remainder of that book (book ii.) is allotted; to that of vivacity, the whole of his third book, and with this third book the work ends.

Elegance, animation, and musicalness,—of no one of these three qualities is so much as a syllable to be found, or so much as a hint to serve as an apology for so incongruous a silence.

Yet several times during the lifetime of the author was this work republished; always under the same all-comprehensive, and not altogether unassuming title, *The Philosophy of Rhetoric.*

* No continuation of this section has been found among the MSS.—*Ed.*

† See infra, chap. xi. p. 275.

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That, in the production of the choicest fruits of this art, accident has been thought to have borne no inconsiderable part, is testified by the common adage, *Poeta nascitur non fit.* But that the part borne by design is not an inconsiderable one, and that from the art of method in particular, it is in use to receive very considerable assistance, is an opinion that seems not much exposed to dispute.

To attempt the rendering any assistance to the cultivators of this art is a task that will scarcely be deemed to come under the province of Logic.

But, for illustration's sake, in the chapter allotted to the topic of invention, an example will be brought to view of an operation whereby assistance might, in measure at least, have been lent to the labours of the poet, viz. by the collection and exhibition of groups of fictions, from which, by the help of analogy, other fictions might be deduced.

5. *Of Methodization as applied to the Assistance of the Judgment or Judicial Faculty.**

6. *Of Methodization as applied to the purpose of Operating on the Affections and Passions.**

Section XIII.

Of the Aristotelian Laws of Method.

In the work of Sanderson, of any such distinction as that between method, considered as applicable to unconnected aggregates of entities, and method considered as applicable to the parts or members of a literary discourse, no intimation is to be found.

But taking together in hand without distinction two topics thus disparate, he exhibits under the appellation of the *laws of method* a string of rules.

In so many different chapters, two sets of propositions are, by him, thus delivered under the name of laws. In the 30th, (Book III.) containing five, one set under the name of Laws of Method, considered *in genere;* in chapter 31, two sets under the name of Laws of Method, considered *in specie,*—in each set two of these laws; one pair being exhibited as extensively applicable to works of science, the other pair as extensively applicable to works of art.

I. Of his laws of method considered *in genere,* the first is styled *Lex Brevitatis.* Though, by this its title, it professes not to bring to view any other virtue than this of *brevity*—to put men, consequently, upon their guard against any other vice than the vice or vices opposite to that virtue, viz. redundancy or superfluity; yet, by the explanation immediately after subjoined, the design of it appears to have included the virtue which has for its opposite the vice of scantiness; and, it is with this unannounced virtue and vice that the explanation commences. *Nihil in disciplina desit aut redundet.*

Of any such distinction as that between repetition in terms and repetition in import, and not in terms only, no intimation is given: under the one name of Tautology, both are confounded.

Instead of irrelevancy and repetition, to both of which ideas belong that are altogether determinate, the word *redundance* is employed, by which nothing more determinate is expressed than a sentiment of disapprobation, attached by the person in question to the discourse in question, in consideration of its quantity, no determinate ground for that disapprobation being brought to view.

To these two vices thus denominated, viz. redundance and tautology, a note of reprobation is applied. The effect of them, he says, is to produce nausea. After this, would any one have expected to find a case in which he is seen recommending the practice of the vices thus denominated. Yet, two such cases there are. One is that which has place, in so far as it is of examples; the other that which has place, in so far as it is of commentaries that the discourse in question is composed. In both these cases such is the awkwardness of his expression, though, assuredly, such was not his meaning,—what he gives you to understand is, that the more redundancy and tautology there is the better.

II. Next comes a proposition styled the Law of Harmony, *Lex Harmoniæ,* by which, when explained, it appears that what is meant to be conveyed is neither more nor less than a warning against the vice of inconsistency, a vice, at the thought of which an expression of ill-humour is let fly—*Doctrinæ singulæ partes inter se consentiant.* Pessimè docet qui quod hic ponit, alibi per incogitantiam evertit, p. 164,—bitter had it been apposite. For its justice, the reproach of inconsistency depends not upon success—not upon the comparative propriety of the two mutually contradictory propositions.

III. In the third place comes his *Lex Unitatis sive Homogeneæ,* in its import and effect another warning, though a little more particular than before, against irrelevancy.

Thereupon comes the explanation, and in it a premature distinction between the two impliedly supposed incompatible cases, viz. that in which the discourse has a subject, and that in which it has an end,—for that to any discourse there should be at the same time a subject and an end is a case, the impossibility of which is virtually assumed; but more of this a little further on.

Nihil in doctrina præcipiatur quod non sit subjecto aut fini homogeneum. Dico *subjecto*

* Both these heads are marked out in the MSS. of Bentham, but the subjects are not discussed.—*Ed.*

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propter scientias ;—*Fini* propter artes et prudentias. Damnat Aristoteles merito transitum à genere ad genus.

IV. In the fourth place, comes his *Lex Generalitatis, sive antecessionis et consequentionis,*—Law of Generality, or of precedence and subsequence.

Follows an explanation of which, after this double title, there surely is no small need. In teaching, let that one, of two things, stand first, without which the other cannot be understood, while without the last-mentioned, the first-mentioned may be understood, Præcedat in docendo id, sine quo alterum intelligi nequit, sed ipsum sine altero.

Thereupon, in guise of a reason, comes an observation which, under that guise, is in fact nothing better than a *petitio principii,*—a begging of the question. For it is necessary (continues he) that those things which follow should receive light and strength from these things which go before ;—not these from those.

In substance and import, of the law here in question, the meaning, it must already have been observed, is neither more nor less than the rule herein above brought to view, having the short title of *Independentia priora.* By the antecessiones et consequentiones, intimation of this import is plainly enough given. But over this apposite enough, and expressive title, precedence is given to the title Lex Generalitatis,—Law of Generality, than which, a more inapposite one could scarcely have been found.

V. Fifth and last of the rules, or laws, as they are styled, delivered in this chapter, comes that which is called *Lex connexionis,* under which head are meant to be given, as the explanation shows, not one rule only, but two, or rather three, which, though in no case inconsistent, are altogether different.

Singulæ partes doctrinæ (says the rule) *aptis transitionibus connectantur.* Let all the several parts of the instruction be connected with one another by apt transitions.

Thereupon comes the explanation in and by which, though in a manner somewhat indirect and inexplicit, no fewer, as just observed, than three distinguishable rules are indicated. The first is to avoid desultoriness,—the second, to employ the requisite means for pointing out such connexions as have place among the parts of the discourse,—the third is to give synoptic tables.

By frequent interruptions (says he, and very truly) the conceptive and retentive faculties are disturbed ;—in this is implied the memento to avoid desultoriness—but by apt colligation, (continues he,) *i. e.* by apt ligaments, both (*i. e.* both conception and memory) will be assisted, and the reason of the method made manifest.

In what follows in the last place, there seems to have been either some misprint or some defect in grammar,—Operæ facturus prœcium (it should have been *pretium*) qui docet methodi connexionem et rationem universam tabulâ aliquâ ; sive diagraphe compendiariâ discipulis repræsentabit.

To give to this proposition what seems to have been its intended import, indeed to give it any import at all, two words, viz. *est* and *si,* appear to be necessary. With these two words inserted in what seem to be the requisite places, the sentence will stand thus :—Operæ facturus pretium (*est*) qui docet, (*si*) methodi connexionem et rationem universam, tabulâ aliquâ sive diagraphe compendiariâ, discipulis representabit. "The teacher will find his labour well repaid if, in some table, or compendious draught, he will exhibit to his pupils the connexion and universal reason of his method."*

Though, by reason of the necessarily extreme generality of the ideas belonging to the subject, and the rather more than necessary vagueness and indeterminateness of the words here employed for the giving expression to them, the information thus given is not altogether so instructive and satisfactory as could be wished, it may be, however, if attended to, not altogether without its use.

Here ends his thirtieth chapter, entitled, Concerning order and method in general,—De Ordine et Methodo in genere ;—follows the thirty-first, entitled,—Concerning method in *specie.* Of the proficiency made by the instructor in the art which he is thus employed in teaching, the specimen here exhibited must be confessed to be rather an unhappy one.

Four propositions, delivered all of them, lest the name of rules should not be assuming enough, under the name of *laws;* and of these laws one is a repetition of the other, and both of them denominated by the name, *Lex Generalitatis,* which in the last preceding chapter we have seen prefixed to another rule or law, which has not so much as a word in common with them.

Wherefore this repetition?—what was the cause of it? It was this : Of method, he says, there are two species extensively applicable,—the one to science, the other to art.

Thereupon, in the same terms, the Lex Generalitatis of this chapter, (so different from the lex generalitatis of the former chapter, which was there given as applicable to every kind of method,) is applied, in the first place, to method considered as applied to *contemplative* disciplines, *i. e.* to *sciencæ;* in the next place, to method considered as applied to *operative* disciplines, *i. e.* to prudences, *prudentiæ,* and arts.

Let things more universal precede, says he,

* Yet by a little allowance, for the scholastic latinity of Sanderson, the passage may admit without alteration of being thus translated,—"He will find his labour repaid who teaches the connexion and universal reason of his method, by some table or shall exhibit it to his pupils in a compendious draught."—*Ed.*

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those which are less universal. Magis universalia præcedant minus universalia.

Remain the two quasi definitions so improperly self-styled laws. 1. The unity of a science (says he) depends on the unity of its subject,—*unitas scientiæ pendet a subjecti unitate.* 2. The unity of an operative discipline depends on the unity of the end,—*unitas disciplinæ operatricis pendet ab unitate finis.*

Another imperfection, no less than an absolute self-contradiction figures in this unhappy chapter. To the species of method which he says, applies to science, and not to practical disciplines, he gives the two synonymous appellatives,—the one Greek, the other Latin, *Synthetic* and Compositive. To the other species of method, which (he says) applies to practical disciplines, and not to sciences, he gives two other synonymous appellatives, Greek and Latin, *Analytic* and Resolutive.

Now, to that word Compositive, on the one hand, to the word Resolutive on the other, what were the ideas annexed in his mind?—*Answer:* None at all; signs they were, but what was wanting to them was, the thing designated. For, of this compositive species of method, what is the second of its two rules? It is this:—Let such things as are most universal come before such things as are less universal. Resolution not Composition, if either of the two, is surely what is recommended by this rule.

Had he but had condescension and patience enough to subjoin to each of his rules an example, though it had been no more than one, he in whose declared opinion, examples cannot be too numerous, would probably have escaped falling into this scrape. But here may be seen a failing into which logicians, the gravest of all writers, as well as the most flowery, are but too apt to fall into,—their species have no individuals contained in them, their nuts have no kernels.

Unfortunate, indeed, have been, from the earliest times known to us, these two magnificent species of method, the Analytic and the Synthetic: a decompounding method which decompounds, and a compounding method which, instead of compounding, decompounds likewise.

Frequent, indeed, is it to see these two terms, especially the word *analytic*, and its conjugates *analysis* and *analyse*, brought to view; never, it is believed, from the supposed distinction, from the supposed contrast, has any light been diffused. To the word analysis, when standing by itself, its proper meaning seems not unfrequently to be annexed; but where, as significative of the opposite meaning, the word *Synthesis* is introduced, such is the effect,—between the one and the other, the meaning of the one and of the other are both wrapped in clouds.

In Algebra, quantity is considered without regard to figure; in Geometry, not but with regard to figure. The Algebraical is termed the analytic method; the Geometrical the synthetic. But, in either of them, what is there either of analysis or synthesis, of decomposition, or of composition, more than in the other.

In both instances, the ideas belonging to them are abstract, general, extensive in the extreme; in the instance of Algebra still more so than in Geometry, the idea of figure being laid out of the case, and nothing left but that of quantity. But still, in either, what is there of analysis more than of synthesis? The parts of a geometrical proposition are put together, and so are those of an algebraical investigation, and here we have synthesis; the parts of which they are respectively composed may be considered, one after another, in the one case, and so may they in the other—and here we have analysis.

CHAPTER X.

OF THE ART OF INVENTION.

SECTION I.

Of Invention in General.

To *teach*, to *learn*, and to *invent*,—these are so many processes or operations, applicable alike to every branch of art or science.

To practice is a sort of operation exclusively applicable to arts; not applicable to any branch of discipline, otherwise than in so far as some portion of art is contained in it; between *teaching* and invention a sort of reciprocality is, moreover, observable; among the subjects of the art of *teaching*, may be the art of invention; among the subjects of the art of *invention* may be the art of teaching.

As between these two,—first, in the order of existence, must have come the art of *invention;* since whatsoever comes to be taught, must first have been invented before it could have been taught.

Of this chapter, the object is to afford such helps as, by the powers of an individual mind,—of the individual mind in question, are capable of being given to invention,—understand, of course, to invention in so far as it is useful,—to invention, in every quarter of the field of thought and action to which it can be applied.

A chapter which takes this for its subject, may be compared to the work of the handicraft, who, having to make a utensil or instrument of new construction, finds occasion, in the first place, to contrive and fabricate one or more of the tools, or other instruments, which he has to employ in making it.

Invention supposes art. The inventor of any branch of an art is the first individual by whom it is practised; or, if between conception and actual practice, there be a difference, insomuch as that of the art which a man was the first to practise, not he himself, but some

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other individual had been the first to conceive, the first individual by whom it had been conceived.

A *new art*, or a *new mode* of practising an art already invented; either of these may the invention have had for its *subjects*. Of this distinction, the indication may, for clearness' sake, be in this or that instance not altogether without its use; although, in many instances, to draw the line between the two cases may be found a matter of such difficulty that, in those instances, the distinction may be seen to be rather a nominal, or verbal, than a real one; the words not finding an individual case to which they can be applied with truth.

Among the *helps* capable of being given to invention, some will be seen alike applicable to all arts; others to no other than this or that particular species of art.

Inventions applicable to all arts are thereby applicable to all *sciences*. Of this proposition, the truth depends upon, and follows from that of a proposition already brought to view, viz. that, between art and science, there exists throughout the whole field of thought and action, a constant conjunction: for every science a correspondent art, and for every art a correspondent science.

Section II.

Helps applicable to Arts in General without Exception or Distinction.

In this view, a few rules present themselves as capable of being found, to some minds in the way of original instruction, to all minds in the way of memento or reminiscence, not altogether without their use; in some instances, by affording positive helps, in others by the indication of certain obstacles, the force of which will be to be encountered, which, in any tract of the field of invention, the labourer will find standing in his way, and opposing his progress; obstacles, of the existence, and force, and operation of which it concerns him to be well apprized, lest, when the time comes, they find him unprepared.

Memento 1. Whatever be the art which, or in which, you think to invent, keep steadily in view the particular end at which it aims, the effect the production of which it has for its object. Keep your eyes fixed upon the end. In two Latin words, *Respice finem*.

Memento 2. Beware of *intellectual servility*. In other words, take reason not custom for your guide: the reason of the thing, including the *nature* of the *effect* meant to be produced, not confining yourself to the pursuing of the *practice*, to the performance of those operations, and those only, by which alone the effect is as yet wont to be produced. *Sit non mos sed Ratio dux.*

Memento 3. Be on your guard against the confederated enemies of all good, and thereby of all new good: viz. 1. Indigenous Intellectual weakness. 2. Sinister interest. 3. Interest-begotten prejudice. 4. Adoptive prejudice. When they cannot oppose by force these will oppose by discouragement, discouraging by opinion and advice.

Memento 4. In relation to every part of your subject, and every object connected with it, render your ideas as clear as possible. *Lux undique fiat.*

Memento 5. For means and instruments, employ analogy. *Analogias undique indagato.*

Memento 6. In your look-out for analogies, for surveying that quarter of the field of thought and action to which the art in question belongs, employ the logical ladders, the ladders made of nest of aggregates placed in logical subalternation. *In analogiarum indagationes scalis logicis utere.*

Memento 7. Inquire and learn whatsoever, for the production of the effect in question, has been already in use or in prospect. *Jam acta et tentata discite.*

Memento 8. In such your survey of existing inventions, look out in preference for the latest of all, not looking backwards but for some special reason. *Postrema exquirito.*

Memento 9. *Quodlibet cum quolibet.* To everything forget not to apply anything. Suppose that of an indefinite multitude of objects, which in consideration of certain properties or qualities, in respect of which they are found or supposed to agree, and certain others, in respect of which they have been found or supposed to disagree, having all of them been placed in one or other of two classes, some article belonging to the one class has, with success, (*i.e.* with some new effect, which either has been found to be, or affords a prospect of being found to be, advantageous,) been applied, no matter in what manner, nor to what purpose in particular, to some article belonging to the other class; in like manner, frame a general resolution not to be departed from in any instance, but for some special cause, (applying to that instance,) to apply to each article belonging to the one class every article belonging to the other.

The sort of special cause here in question will be one of these two, viz. 1. Apparently preponderant probability of not producing any new result at all. 2. Apparently preponderant probability that the new result, if any, will, instead of proving preponderantly advantageous, prove preponderantly disadvantageous.

N.B.—Among physical arts and sciences, the branch of art and science to which this rule or memento is in a particular degree applicable, is the Chemical, including, in so far as they belong to it, the several subordinate and practical branches of art and science which come under its department, *e.g.* cookery, pharmacy, agriculture, architecture, in so far as concerns *materials*.

Memento 10. In taking a survey of practice, distinguish in it as many distinguishable points as the nature of the case appears to afford, and on each of these points, try its utility and propriety, by its relation to the end.

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Examples.—The field of medical practice is a field in which many examples, indicative of the utility of this rule, might be collected. In the comparatively ancient system of pharmacy may be found medicines, in the composition of which there were drugs, to the amount of twenty or thirty different sorts, of which, by comparatively recent observation, experience, and experiment, all but two or three have been found either wholly inoperative, or unconducive to the end.

In every part of the field of practice in which the practice has not yet been thus directed, and its several distinguishable parts or points confronted with the proper end, uninfluencing circumstances, and even obstructive circumstances, *i. e.* obstacles, may be seen confounded with promotive causes, and the result, be it what it may, ascribed without distinction to their conjunct agency; and, in this way, the character of promotive causes ascribed to uninfluencing and even to obstructive causes.

Of this mode of confusion, examples will naturally be to be found in abundance in the system of government established in every country, and in particular in that branch which regards constitutional law. Of whatsoever degree of prosperity the state may be supposed to be in the enjoyment of, as many abuses and imperfections as in the theory or practice of it have place, will by all those who profit by them, be of course placed more or less confidently and explicitly upon the list of promotive causes.*

On the subject of each of these mementos, a few observations present themselves as capable of having their use. In the course of them it will, it is believed, be seen that of all of them, howsoever at first view the contrary might in some instances be supposed, there is not one that is not in a manner, more or less pointed, applicable to every track which, in the field of thought and action, it is in the power of art and invention, not excepting science, to take.

The two first mementos demand a joint consideration.

The end? It may be asked, exists there any man, who, be the art what it may, in the practice of it, ever omits so much as for a moment either to keep his eyes fixed upon the end, or to keep a look-out for the fittest and most promising means?

Oh, yes; with the exception of the inventive few, who are few indeed, every man. The end, yes, of the end, he is not altogether unregardful: but as to *means*, the *means* which he sees pursued by others, by all those from whose discourse and practice his notions on the subject have been derived, these are the means which, from first to last, he has been in the habit of regarding as not only conducive to the end, but, if not the only ones that are so in any degree, at any rate those which are so in a higher degree than any others which the nature of the case admits of.

Let reason be fruitful, custom barren: such indeed is the advice which on this subject has been delivered. Delivered? but by whom?—by Bacon; by the man whose mind was of almost all minds the most unlike to others. In regard to fruitfulness, how stands the matter as between Reason and Custom in the world at large? Reason breeds like a pole-cat; Custom like a doe-rabbit.

Third Memento.† The more *stupid* a man is, especially if in his mind, *stupidity* be, as it is not unapt to be, accompanied by *self-conceit*, the more improbable it will appear to him, that to the invention in question, be it what it may, any such characters as those of *useful* and *meritorious*, would be found to belong to it. So difficult as the art is in its *present* state, so great the expense which, in the articles of genius and industry, which it must have cost to the men of former times to bring the art up to its present mark in the scale of perfection, so great the multitudes that for so many ages must have been occupied in the endeavour to give to it every degree of perfection of which it is susceptible,—is it in any degree—is it preponderently probable that, by the man in question, (who in his exterior has probably nothing to distinguish him to his advantage, and whose weaknesses, whatever they may be, being indicated by Envy and Jealousy, are laid open to general observation,) so important an addition to the art should really have been made. Such are the observations by which the consideration is diverted from modern invention.

Fourth Memento. Clarification of ideas.—If the subject be of the physical class, render the images, which you form of it in your mind, as correct and complete as possible.

If the subject be of the psychical class, in so far as the words employed in discoursing of it are names of fictitious entities, take the only course by which it is possible for a man to give perfect clearness to the ideas of which they serve to constitute the signs, viz., by searching out the real entities in which these names of fictitious entities have their source.

On some subjects, in some instances, without the use of words, a man may exercise invention, drawing his materials and instruments from the stock of ideas already laid up in his own mind.

But unless, by the actual survey of sensible works, the results and fruits of inventions already executed, it is only through the medium of words, that for his assistance in the exercise of invention, he can make any use of the inventions, or practices, or works of others. Here,

* See Book of Fallacies, chap. ii. (vol. ii. p. 466.)

† There is here in the MS.—"N.B. Invention is the offspring of genius;" a dictum, the influence of which it was probably intended to examine. The paragraph following is headed, "Indigenous intellectual weakness;" and, at the end of it, there is a memorandum, "go on with the three remaining natural enemies of genius."—*Ed.*

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then, are so many collections of signs of ideas, from which, according to the degree of attention bestowed on the consideration of them, and the degree of discernment with which that attention is accompanied, the ideas which he obtains from those words will be more or less clear, ambiguous, or obscure.

In so far as the words are such as to be themselves direct representatives of clear ideas, so much the better: but even where this is in but a small degree, or not in any degree, the case, still it will frequently happen, that by the reflections and comparisons of which in his mind they are productive, they may render to him more or less assistance towards the formation of other ideas, such as shall, in a greater or less degree, be clearer than those by which they were themselves suggested.*

Fifth and Sixth Mementos. The mode and use of applying these *subalternation scales* are as follows, viz.:

I. Application in the *descending line.*

With the exception of such words as are names of individual objects, take any one of the material words that present themselves as belonging to the subject, not being the name of an individual alone, this word will be the name of a *sort* of objects, the name, (say,) of an aggregate. If the aggregate be the denomination of a *genus*, think of the several species which, by their respective names, present themselves as being contained under it. Whatsoever is predicated of the genus, will, in so far as it is truly predicated, be, with equal truth, predicable of all these several species.

II. Application in the *ascending line.*

In like manner look out for the name of the next superior genus; with reference to which, the genus in question is but a species, and observe, try, or conjecture, whether that which beyond doubt, has been found predicable with truth of the whole of this species, be, or promise to be, with like truth predicable of the whole, or any other part of the aggregate, designated by the name of that genus.

It is in the instance of the physical department of the field of thought and action, and more particularly to the chemical district of that department, that the applicability of this memento is most conspicuous. Upon every subject, try, or at least, think of trying, every operation; to every subject in the character of a menstruum, apply every subject in the character of a solvent, and so on.

It is to the extent in which application has been made of this memento, that chemical science is indebted for the prodigious progress which, within the compass of the present generation, has been made in it.

It is by the ideal decomposition, performed by the separate consideration of the several distinguishable operations, which respectively constitute the component parts of various mechanical arts, and thence, by the division of labour, that the great improvements, made within the last half century in manufactures, have been effected.

Seventh and Eighth Mementos. Inventions of the physical stamp, are those, in regard to which, the importance of these mementos is, generally speaking, at its highest pitch.

Discovery, practice, publication,—by these words are designated so many periods, which, in the career of invention, may, to the purpose here in question, be distinguished with practical advantage.

To the purpose of the discovery, that, generally speaking, it cannot but be of advantage to a person of an inventive turn, to be apprised of, and acquainted with whatsoever has been already invented, or thought of, in the same line, is obvious enough.

But so far as mere *discovery* is concerned, any inconvenience, which it can happen to a man to incur, from a want of acquaintance with anything that has already been discovered by others, is, in this case, but inconsiderable, in comparison with what is liable to have place. In the first place, so far, indeed, as for want of being pre-acquainted, with this or that discovery which has already been made by this or that other person, he fails of making this or that discovery, which, had it happened to him to have been acquainted with the existing discovery in question, he would have made: so far, here is so much lost to the individual in question, and to the world at large.

In the next place, in so far as after the discovery has been made by himself, it happens to him to learn that this same discovery has already been made by some one else; in this case, what is but natural enough is, that in proportion to what appears to be the degree of importance of the discovery, uneasiness in the shape of a pain of disappointment, should be experienced by him.

But in such a track as that of invention, no step that has ever been taken, no step, be the ulterior result of it what it may, is ever lost. Of every step, present pleasure is the accompaniment, from every step the mind derives increase of vigour; of that which is an instrument of future security and future pleasure.

Ninth Memento. Quodlibet cum quolibet.—A mechanical help will be found in the facility of confrontation. For this purpose, in so far as writing, *i. e.* manuscript is employed, let it be on one side only of the paper.

Reason.—Propositions, which are on different sides of the same plane, cannot invariably be confronted with each other. While that which is on page 2 is hunting for the terms of that which is on page 1, and what is intended to be compared with it, are either forgotten or become dubious.

If such is liable to be the case with the smallest members of a discourse, how much

* Mechanics are frequently bad explainers of their inventions. Newton himself was a great inventor, not always a clear explainer.

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with those that are larger and complex sentences and whole g, nothing could be more incongruous than at the back of a table intended for a synoptic one, to print anything that may require to be confronted with any part of the matter of it.

APPENDIX.—A.

...NA OF THE HUMAN MIND.

SECTION I.

Analytical View of the Phenomena of the Human Mind.

The whole structure of the mind may be considered as included in two faculties, viz. the perceptive and the appetitive.

To the perceptive belong all mental experiences,—simple experiences;—to the appetitive all mental operations and their results.

In the perceptive faculty the judicial may, in a certain point of view, be considered as included.

To the head of *experiences* may be referred the following phenomena.

1. *Apathematic* perceptions;— perceptions as they have place in the case in which they do not consist of, nor are attended with, any distinguishable pain or pleasure.

2. *Pathematic* perceptions;—perceptions as they have place in the case where they consist of, or are attended with, sensations or feelings either of pain or pleasure, *i. e.* are attended with pains or painful perceptions, or pleasures or pleasurable perceptions.

Pathematic, or apathematic perceptions, may be distinguished into judgment-not-involving, and judgment-involving.

A judgment-involving perception is the perception of a relation, *i. e.* of the existence of a relation between some two objects.

One of the relations most frequently exemplified in this way, is the relation of cause and effect.

Between a judgment-involving, and a judgment-not-involving, perception, the differential character is this:—In so far as an experience or act of the judicial faculty is not involved in the perception in question, it is not susceptible of error,—in so far as any such experience or act is involved, it is susceptible of error.

The case of a judgment-involving perception is exemplified in, and by, every one of the five senses.

1. I open my eyes,—I see something before me,—it seems to me that it is a distant hill; but in fact it is a cloud. Here is a misjudgment, here is error. But that I see something, *i. e.* that on the retina of my eyes an image is depicted, in this is no error.

2. I hear a sound,—to me it seems the voice of a man at a distance, but in fact it is the cry of an owl.

3. I am sitting in the dark,—a piece of drapery is presented to me;—I am asked what it is, I pronounce it silk-velvet; but in fact it is cotton-velvet.

4. Left in the dark, a plate of boiled vegetables is placed before me,—I am asked what it is—it tastes like spinach, but in fact it is beet leaves.

5. Still in the dark, a flower is presented to me,—I am asked what it is—it smells to me like a pink, but in fact it is a carnation.

In the production of that state of mind in which a perception whether judgment-involving, or judgment-not-involving, has place, objects exterior to the body have, or have not, borne a part. In the first case, the perception may be termed a perception *ab extra*, or say derivative;—in the other case, a perception purely *ab intra*, or say indigenous.

Of derivative perceptions, the above five are each of them so many exemplifications.

Of indigenous perceptions, a sense of dilatation in the stomach, a sense of increased or diminished heat, are exemplifications,—in all or in each of which cases, the perception may be apathematic or pathematic,—and, if pathematic, accompanied either with pain or pleasure.

SECTION II.

Operations—Results of the Exercise of the Appetitive Faculty.

Every operation of the mind, and thence every operation of the body, is the result of an exercise of the will, or volitional faculty. The volitional is a branch of the appetitive faculty, *i. e.* that faculty in which desire, in all its several modifications, has place.

Desire has for its object either pleasure or pain, or, what is commonly the case, a mixture of both, in ever varying and unascertainable proportions.

The desire which has pleasure for its object, is the desire of the presence of such pleasure. Desire which has pain for its object, is the desire of the absence of such pain.

I see an apple, I conceive a desire to eat, and thence to possess that apple;—if not being either hungry or thirsty, my desire is, notwithstanding, excited by the supposed agreeable flavour of the apple, pleasure, and pleasure alone, viz. the presence of that pleasure, such as it is, is the object of my desire. If being either hungry or thirsty, or both, and that to a degree of uneasiness, *pain*, viz. the

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absence of that same uneasiness is moreover the object.

A desire then has, in every case, an internal object, viz. the corresponding pleasure, and in so far as that object has for its expected *source* an object exterior to the body, an external object.

A desire having pleasure alone, *i. e.* presence of pleasure for its internal object, has place, in so far as, from the presence or productiveness of the supposed source, pleasure is regarded as about to be eventually experienced.

A desire having pain alone, *i. e.* absence of pain for its internal object, has place in so far as, from the presence or productiveness of the supposed source, pain is regarded as being eventually about to be experienced.

A desire having pleasure and pain taken together for its internal object, has place, in so far as, while from the presence or productiveness of the supposed source, pleasure is regarded as being eventually about to be experienced, pain is, at the same time, experienced from the reflection of the actual absence of that same source;—or in so far as, while from the presence of the supposed source, pain is regarded as being eventually about to be experienced, pleasure is at the same time experienced from the reflection of the actual absence of that same source.

If the desire, being a desire having pleasure for its object, be, to a certain degree intense, in this case, so long as it remains unsatisfied, it has a certain degree of pain for its inseparable accompaniment, viz. the pain of non-possession, or say privation, produced by the absence of the source, and the consequent non-satisfaction of the desire.

If the desire be a desire having pain for its object, *i. e.* the absence of pain from this or that particular source, in this case, if the desire be to a certain degree intense, it has for its inseparable accompaniment, a persuasion more or less intense of the probability of a state of things, in which pain will be experienced.

Considered as having produced, or as being with more or less probability of success, operating towards the production of the result, (viz. presence of pleasure, or absence of pain,) which is the object of it, a desire is termed a *motive*.

In so far as the production of the state of things which is the immediate object of the desire, is considered as following immediately and certainly upon the existence of the desire an act of the *will* is said to take place,—the faculty by which this effect is considered as produced, is termed the volitional, or volitive faculty, or, in one word, the *will*.

The volitional faculty is, therefore, a branch of the appetitive.

But no act of the will can take place but in consequence of a correspondent desire; in consequence of the action of a *desire* in the character of a motive.

Also, no desire can have place, unless when the idea of pleasure or pain, in some shape or degree, has place. Minute, it is true, minute in the extreme is the quantity of pleasure or pain requisite and sufficient to the formation of a desire; but still it is not the less true,—take away all pleasure and all pain, and you have no desire.*

Pleasure and pain, considered in themselves, belong to the perceptive faculty, *i. e.* to the pathematic branch of it.

But pleasure and pain considered as operating, as above, in the production of *desires*, operating, as above, in the character of motives, and thus producing *volition*, action, internal or external, corporeal, or purely mental, belong to the appetitive faculty.

Pleasure and pain compose, therefore, as it were, the bond of union and channel of communication between the two faculties.

Attention is the result of an act of the will; of an exercise of the volitional branch of the appetitive faculty.

In so far as attention has place; in so far as attention is applied, either to the direction, or to the observation of an *experience*, the experience is converted into an operation; or, at any rate, in the field of thought, that place which would otherwise have been the field of an experience and nothing more, becomes now the field of an experience, and of a correspondent operation at the same time,—an operation having for its subject the object which was the source or seat of the experience.

In some instances, language affords not as yet any word, or words, by which the difference between the presence or absence of attention, in relation to the effect in question, is denoted.

Here the word *judgment*,—act of the judgment,—is the locution employed, as well in the case of those instantaneous and involuntary judgments, which, as above are commonly confounded with simple perception, and those attentive and elaborate judgments which are pronounced in the senate, on the bench, or in the laboratory of the chemist, or at the library-table of the logician.

Without attention, the *memory* is but the seat of a mere passive experience, which is termed remembrance. In consequence of an exertion or exercise of the will, importing attention applied to the purpose of searching out and bringing from the storehouse of the mind

* In the production of volition, a desire operating in the character of a motive is either certainly or not certainly effective; if certainly effective, an act of the will is the consequence. The cause of my own act is always my own desire; and in this sense my will is free. But the cause of that desire, what is it? In some cases I know what it is; in others not. When I know not what it is, how is my will free? The action of it is in so far dependent upon an unknown cause external to myself.

When I make my choice amongst a multitude of antagonizing desires, what is the cause of that choice?

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the impression in question, it becomes the seat and subject of an operation termed recollection.

Section III.

Enumeration of the Mental Faculties.

Of a set of fictitious entities, to give a list, neither the correctness nor the completeness of which shall be exempt from dispute or doubt, cannot be a very easy task. Of the following articles, neither the perceptibility, (meaning that sort of perceptibility of which these sorts of fictitious entities are susceptible,) neither the perceptibility nor the mutual *distinctness*, say rather, *distinguishability*, seems much exposed to dispute.*

* 1. *Perception*; or say, *perceptive faculty*, *alias* simple apprehension.

* 2. *Judgment*; or say, *judicial faculty*.

* 3. *Memory*; or say, *retentive faculty*: this is either, 1. Passive; or 2. Active, *i. e.* recollective.

* 4. *Deduction*; or say, *ratiocinative* or *deductive faculty*: that by which a number of *judgments*, i. e. acts of the Judicial faculty are deduced, one from another.

5. *Abstraction*; or say, *abstractive faculty*.

* 6. *Imagination*; or say, *imaginative faculty*, whereby a number of abstracted ideas, results or products of the exercise of the *abstractive* faculty, are compounded and put together.

7. *Invention*; or say, *inventive faculty*: whereby, out of a number of the products of the abstractive faculty, such compounds are formed as are *new*, i. e. were never produced before. *Invention* is *imagination* directed in its exercise to the attainment of some particular *end*.

8. *Methodization*; or say, *arrangement*, or the exercise of what may be termed the *tactic faculty*. It may be employed in the service of any one or more of the several faculties above-mentioned.

9. *Attention*; or say, the *attentive faculty*. The exercise of this faculty seems to be the result of an exercise of the *will*; of a special application made of the power of that faculty, to the purpose of attaching to their work, with different *degrees of force*, and for different *lengths of time*, any one or more of the several distinguishable faculties above-mentioned.

10. *Observation*. In this are included *perception*, *memory*, *judgment*, and commonly *ratiocination*, set, and kept at work, by *attention*, and directed commonly in their exercise, to the accomplishment of some particular end.

* 11. *Communication*; or say, *the communicative faculty*: a faculty which may have for its subject the results or products of the exercise of any one or more of the several faculties above-mentioned. *Speaking*, *writing*, and *pantomime*, i. e. discourse by *gestures*, or otherwise by *deportment*, are so many modes in and by which it is exercised.

Communication, on the one part supposes *receipt*, or say *reception*, on the other. In so far as to the exercise of the art of *reception*, attention on the part of the *receiver* is considered as necessary, the *receiver* is styled a *learner*.

Reflection is *attention*, considered as carried backwards, and applied to objects considered as presented and kept in view by the memory.

12. *Comparison* is *attention*, considered as applied alternately, and as nearly as possible simultaneously, to the two, or greater number of objects which are the subjects of it. For the purpose of giving direction to an exercise of the judicial faculty, the operation by which this faculty is exercised can scarcely, it is believed, be performed for a continuance, and with advantage, on more than two objects at a time; at any rate, to the purpose of noting points of resemblance and difference for the purpose of distributing an aggregate into parcels which are to be compared with one another, it is necessary to proceed, in the first instance, by dividing it, as it were, at one stroke. If, for any such purpose, objects in any number greater than two are compared with one another, the attention finds it necessary to divide the three, for this purpose, into two parcels, some one of the three objects forming one parcel, and the two remaining ones together another. Thus, in the case of *physical* motion, between any two objects, alternate motion is a sort of operation in itself extremely simple, produced with little difficulty, of which the exemplifications are numerous and frequently occurring, and which has, accordingly, received a name, viz. vibration; but, between any greater number, though it were so small as *three*, in nature no such alternate motion is to be found anywhere exemplified, nor could it, without a highly complicated system of machines, be produced: of this difference, a sort of exemplification seems even to be afforded by the very word *between*. Between, *i. e.* by twain, means by parcels consisting each of no more than *two* articles, as in the phrase, where it is said, let comparison be made between these two articles. Here, in this case, the comparison is understood to be perfectly made, or, at any rate, to be capable of being perfectly made.

But if the number of articles to be compared be greater than two, in this case the word *between* cannot, with propriety, be employed. Instead of it the language affords no word less improper than the word *among*. But a comparison made among three or more articles does not present itself in the character of a perfect one. It seems as if the comparison ought to be made either between any two leaving out the others, or between any one of them taken singly on the one part, and

* Of those which are here distinguished by an * mention is made in D'Alembert's Table, these and no others.

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the other two formed into one parcel on the other part; in a word, where the word among, is used in this case, besides that the number of the objects in question is left indeterminate, the operation itself is not the same sort of operation as where the word *between* is employed.

Change the expression ever so often, still the difficulty, not to say the impossibility, of keeping under equal consideration for any considerable length of time any greater number of objects than two, presses itself into view. You may, indeed, say, compare together the objects A, B, and C; but, then, as in the case where the preposition, *among*, is employed, the comparison has the air of a confused, partial, and indeterminate one. But then, in each of these cases, so it is that, for the purpose of the comparison, the three articles are, in the first place, made up into one aggregate, and, in the next place, that aggregate is divided into two, and no more than two, parcels.

13. Synthesis or combination.
14. Generalization.
15. Induction.
16. Analysis, *i. e.* division, viz. logical or anological analysis.
17. Distribution.*

APPENDIX B.

DIVISION OF ART AND SCIENCE.†

SECTION I.

Generals or Particulars, Abstractions or Concretions,—which first?

In the field of Eudæmonics and Pantognosy, the field of abstractions or the field of concretions,—to which of these two compartments shall the surveying eye apply itself?

In the whole human race, considered at all periods of its history, the knowledge of particulars has preceded that of generals. Abstraction, a branch of Logic, is an art that has been learned by slow degrees.

But, when general conceptions have once been attained, the communication of them is performed with much more despatch, even to the most unfurnished and uninformed minds, than that of particulars; *i. e.* in a given time, much more knowledge may be communicated by the use of more general terms in company with less general terms, than by the use of less general terms alone.

True it is, without the use of particular terms, and even according to the nature of the subject, *i. e.* as it belongs to somatics or psychology, no clear knowledge can be conveyed by general ones, but by a single individual or species, exhibited in the character of a specimen or sample, for the explanation and illustration of a generic term, the exhibition of all the other individuals or particulars contained in the genus of which it is the name, may be saved.

With these explanations, from particulars to generals, may be stated as the actual order of learning or acquisition; but from generals to particulars, the most convenient and extensively efficient order of teaching or communicating instruction.

Condillac was a French Abbé. In his youth he had served an apprenticeship to the Greek statuary, so well known to the Dilettanti by the name of Pygmalion. In his workshop, he had learned that secret, which, to statuaries, is what the philosopher's stone is to chemists, —the art of giving life to clay or marble. Pygmalion's practical object in the animating of his statue, was, as everybody knows, the pleasure of teaching it to speak,—more appositely, the teaching *her* the art of love. Condillac being an abbé, and moreover a man of an independent mind, and an original cast of character—a philosopher by trade—determined, instead of making himself the servile copyist of his master, to teach logic to his statue instead of love.‡

In this view, instead of cramming her all at once with the five senses—not to speak of the sixth sense, which, how necessary soever to the purpose of the Greek, would have been quite foreign to the new purpose of this Frenchman—he found it necessary to proceed upon a more economical plan, and to *begin*, at least, with furnishing them to her one by one.

For matter for one of her first exercises, he took Aristotle's logic in hand, and proposed to himself to teach her the ten predicaments, and by means of the ten predicaments, proposed to himself to teach her the nature of those fictitious entities called abstractions.

When it came to the point, he found that Aristotle's list was not quite so well made up as it might have been, and doubtless would have been, had the ingenious Greek had the advantage of consulting with Locke and a few others.

In teaching her these predicaments, his plan was to begin with those, if any such there were, the nature of which could be taught without taking into consideration any other.

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* Respecting these five last-mentioned faculties, no further notice appears to have been taken in the MSS.—*Ed.*

† Many of the subjects of this Appendix will be found discussed more at length in Chrestomathia, appendix.—*Ed.*

‡ Like so many other histories of modern date, the present is a history partly of what, in the way in question, the hero actually did, partly of what he might have done. What he actually did, may be seen in a little work, in one or two small 12mo volumes, entitled, *Traité des Sensations.* It is not known to have ever been translated into English, though on the subject of logic it contains a quantity of information not derivable from any other source.

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In all new courses of experiment, there is commonly a good deal of fumbling. Of the crude conception that occurred to him, and the unsuccessful trials that took place in consequence, mention need not be made; of a few of those by which it appeared that more or less light was thrown upon the subject, a short and plain account will suffice for the present purpose.

1. He gave her the sense of smelling;—he presented her with a rose. In the way of logic, nothing was taught her by the experiment. She learned the smell of the rose, and liked it very well; but she knew not what it came from,—whether from a rose-tree, from otto of roses, or from the *esprit de rose*.

2. Equally limited was the science she made herself mistress of when endued with the sense of taste. A slice of pine-apple was no less agreeable to her than the rose had been; but all she learnt from it was the taste of pine-apples.

3. He gave her the sense of sight, and now for the first time he gave her schooling. Smelling and tasting were no better than child's play.

The first thing he presented to her view was a round spot. Nothing was to be learned from the round spot.

With a little alteration, the round spot was converted into a triangle, and by this triangle was furnished the first lesson she learned in the art of logic. The triangle happened to be an equilateral one, not but that any other might have done nearly as well. Being a triangle, it had three points or corners. Look there, says he, at those points; in that place on the left, one,—in that on the right a second, —above them both, a third. Here you have numbers one, two, three.

But when the predicament of number was thus made sensible to her, the predicament of figure was made sensible to her at the same time; for by these three points the triangle had its bounds, and by these bounds its figure was determined.

To make the matter the clearer, he presented to her, by the side of this triangular spot, the round one. From this round one, viewed by itself, nothing had been to be learned. A figure it had; but being so perfectly uniform, and presenting to view but one number, it had not presented her with any such idea as that of figure, no more than the smell of the rose, or the taste of the pine-apple had done. But now being placed by the side of the triangle, and her eye passing continually from the one to the other, the difference between the one and the other was so often presented to her, and, by the contrast, her ideas of figure became every moment more and more distinct, as well as from the first moment more extensive.

By knowing what number was, she already had some notion of what arithmetic is; and by knowing what figure is, she had, moreover, some notion of what geometry is. He would have been glad to have given her a correspondent notion of what algebra is; but this he found impossible till she had become more or less acquainted with the use of language.

Arithmetic has for its subject number, directly and independently expressed, viz. the several modifications of it, all of them expressed by so many determinate absolute and appropriate names.

Algebra has for its subject number and numbers, but these expressed in every instance, not by any determinate and absolute names, but by names indicative, in each instance, of some relation borne by the object in question to some determinate number or numbers, which sooner or later may be presented to view by their respective names, but which as yet are not presented to view.

Section II.

Field occupied by Art and Science.

Entering upon the field of mesology, we shall find science occupying a compartment, over a portion only of which, and that comparatively a small one, it is in the power of art to follow it; always excepted that space and quantity of art, which being employed, and that of necessity, in the acquisition of the science, is therefore inseparably attached to it.

Contributory to well-being, human well-being, and its opposite, are, or may be, for they have been supposed to be, all beings of which we have any notion, as well as all with which we have any acquaintance. If so it be, then so it is that with that portion of the field of eudæmonics which is occupied by mesology; the whole field of *ontology*,—a word more in use in former days than at present, and employed to signify the science of being in general, is coincident.*

For the designation of the general term science, considered as applying to this or that particular portion of the field of science by some persons, and on some occasions, the termination *logy*, and by others the termination *gnosy*, is preferred. On other occasions, or by some persons, to give compactness to the appellation, both are discarded, and the termination *cs*,† as designative of an adjective, of which the substantive is subintellected, is preferred.‡ These terminations are all taken from the Greek, the language without which scarcely any new names could, by our barbarism-sprung language, be framed; and consequently scarcely any new views of things taken or expressed, nor, in so far as former ones are either

* See the tract on Ontology in this volume, with its division of entities into real and fictitious, —perceptible and inferential.

† See Chrestomathia, supra, p. 82.

‡ Examples: *Mathematics, dynamics, therapeutics, asthetics, tactics.*

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incorrect or incomplete, any true and adequate ones be so much as formed.

Somatology, somatognosy, or *somatics*;* *psychology, psychognosy*, or *psychics*,†—to one or other of these denominations will every branch of science, which has for its subject the field of, to us, perceptible existence, the class, to us, of perceptible beings, be found referable.

Physioplastic, anthropoplastic, by one or other of these appellatives will the condition of all beings by which any part of the field of Somatics is seen to be occupied, be found referable; physioplastic, the state in which, being found in the bosom, they are supposed to have been formed by the hands, of nature; anthropoplastic, the state into which, after having been torn from the bosom of nature, they have been brought by human labour.

The labour or course of the operations by which, under the hands of man, forms are given to bodies different in any respect from those into which they are cast by nature, may be considered at two different stages or points of time: viz. 1. The stage during which, with a view to the advancement whether of art or science, or of both in one, trials are made of the different forms into which they may be cast, of the different properties immediately or eventually conducive to man's well-being, they may be discovered or made to possess, and of the different points of view in which, for that purpose, they may be contemplated and subjected to examination. 2. The stage at which, by the light of a more or less considerable mass of knowledge, derived from such trials, means having been found of casting them into such and such useful forms, and thereby enduing them with such and such useful properties, the casting them into these forms, and enduing them with these properties, has become the regular and extensive result of an established course of practice.

In their physioplastic state, in the state in which, fashioned by the hand of nature, they are found in the bosom of nature, bodies form the contents and subject of that portion of the field of Somatics which is so commonly but so improperly designated by the appellation of Natural History, and which the term *Physiology* having, by a narrower application, been unfitted for this use, may more aptly and expressively, it should seem, be designated by the term *Physiognosy*.

In so far as they are considered as forming the subject of these preliminary trials and examinations which, as above, serve as the foundations for those ulterior operations by which they are rendered subservient to general use, they form the contents of that portion of the field of Somatics which also, very generally, but not the less inappropriately, has been termed sometimes *Natural Philosophy*, sometimes Experimental Philosophy, but which neither unaptly nor unexpressively, may, it is supposed, be termed *Empiric Somatology*.‡

The further we advance, the more clearly do the convenience of an apposite nomenclature and systematic arrangement, and the inconvenience of inapposite nomenclature and unsystematic arrangement become perceptible.

Somatics being the name given to the stem, by the two adjuncts physioplastic and anthropoplastic, a designation which is correct, and to every one to whom the import attached to those adjuncts in the original language is familiar, an intelligible one is presented. By a person whose ignorance of all particulars contained in the respective fields of human science, should be as great as that of any person can be, the import of the two names, and accordingly the nature of the two branches of science would nevertheless be conceived and understood, so he were but apprized of the import of the Greek words correspondent to the word nature and the word man.

So much for the apposite and systematic nomenclature and arrangement, now as to the inapposite and unsystematic. Of the two composing the inapposite appellative employed to designate physioplastic somatics, the word *natural*, in so far as it went, was apposite and expressive. But when applied to designate the anthropoplastic branch of somatics, instead of being apposite and leading to truth, it leads of itself to error. What it gives you to understand is, that under the branch of science to which it thus gives name, in the observation made on the bodies which are the subjects of it, the state to which the consideration is confined is that into which they have been brought by the hands of nature, whereas the truth is, that the state in which alone they constitute, in a direct way, the subject of anthropoplastic somatology, is the state into which they have been brought, or are capable of being brought by the hand of man.

True it is, that in anthropoplastic somatics, without more or less regard paid to physioplastic somatics, that is, to the bodies which are constituted its subjects, and that too in the state in which they are its subjects, nothing could be done; for it is to physioplastic somatology that anthropoplastic somatology is indebted for all its subjects, for all the materials which it can have to work upon. But from this no such consequences follow as that, in any part, anthropoplastic and physioplastic are the same. By architecture, stone and wood are employed; but architecture is not, on this account, one and the same branch of art and science either with mineralogy or with botany.

When upon taking a further step, we come to the word philosophy, the misrepresentation, instead of receiving any correction is rendered still more flagrant. Instead of a state of, or

* From the Greek word for body, viz. σωμα.

† From the Greek word for soul, viz. Ψυχη.

‡ See the inaptness of the terms *Natural History* and *Natural Philosophy* discussed above, p. 68, *et seq.* An exposition in somewhat similar terms follows in the MS. of the text.—*Ed.*

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acquisition made by the understanding, and that alone, that which the term philosophy was originally employed to designate, and which, even now, it ceases not to convey to those who are more or less acquainted with the language from which it has been borrowed, is a state of the *affections*, a sentiment or affection of *love* and *good-liking*. Of *good-liking* in relation to what?—not to this branch of somatics in contradistinction to the other, nor yet to somatics in contradistinction to any other branch of science; no, nor so much as to science in contradistinction to anything else. To what then?—Why, even to *wisdom*. And what is wisdom?—A term of wide and imperfectly determined import, employed not so much to designate science as to designate an habitually correct state of the judgment, or judicial faculty, to whatsoever subjects, considered as applied, but more particularly, to such as are regarded as standing distinguished, in respect of their importance, in the highest degree.

As in its original import, this term Natural Philosophy is scarcely expressive of any idea which it is employed to express; hence it is, that, from the first to the last, in relation to this or that less extensive branch of science, a question may be,—does it belong to Natural History, or does it belong to Natural Philosophy? whereas, under the terms physioplastic somatology, and anthropoplastic somatology, a clear line of demarkation between the two sciences, thus designated, is drawn at one stroke, and all such questions are nipped in the bud.

Instead of physioplastic and anthropoplastic,—had the words *pushpin* and *trapball* been to the same extent, and for the same length of time, employed for the designation of the two branches of art and science, for the designation of which the terms Natural History and Natural Philosophy still continue to be employed, the change, instead of being for the worse, would have been rather for the better. By the word trapball, no person would have been tempted to regard as belonging to physioplastics what belongs to anthropoplastics; whereas, of the term Natural Philosophy, when thus applied, the tendency to produce this sort of misconception is, as hath just been seen, not inconsiderable. A word is not the more inconvenient, but the less inconvenient the less liable it is to lead men to confound with any object those objects from which it is most material that it should be distinguished.

The attention which it applies to its subjects somatology may either apply indiscriminately to all the properties observable in them, or confine itself to any one or more of them to the exclusion of the rest; in the first case, *ageledodiascopic*, or, for shortness, ageledoscopic,—in the other case, *choristodiascopic*, or, for shortness, choristoscopic, are the names by which it may respectively be distinguished.

Vacuity, rest, time, figure, quantity,—all these form so many distinguishable subjects of choristoscopic somatics.

Of vacuity it may seem that it belongs not to the properties of body. But, be the body what it may, and be the place which, at the time in question, it occupies what it may, it may as easily be conceived to be absent from as present at, and in that place. To be either in or out of any given place is, therefore, among the properties of body; for, if there were no such being as a body, there would be no such distinction as that between place and place.

It is only by abstraction that the idea of rest can be formed any more than that of body: it has for its ground the idea of place. It is the absence of motion, and of motion itself no idea can be formed but what has for its ground the idea of place.

Take at any time into consideration any body, considering it with reference to the place which, at that same time, it occupies; but, from that same place conceive it removed, and into that same place suppose no other body or portion of matter introduced. In this way, and no other, is formed the idea of a vacuum or portion of unoccupied space.

In so far as human observation has been able to apply itself to the subject, absolute motion is at all times among the inherent inseparable properties of every distinct body, and, in so far, of every particle of matter. But of relative motion, motion as between any two bodies or particles of matter considered in relation to one another, examples, real or apparent, may, upon the surface of this our globe be found in abundance.

Of relative motion, or its negation relative rest, no idea can, it should seem, be formed, otherwise than by the help of the idea of time. Two distinct bodies, in so far as in the course of a given length of time, the distance that intervenes between them is observed to be, or appears to be, different, are observed to have been one or both in motion with reference to each other,—to have been, one or other, or both of them, in a state of relative motion;—in so far as no difference in respect of the amount of the distance between them has been observed, or is supposed to be observable, they are regarded as having been in a state of rest.

The idea of time is derived, says the common phrase, from the succession of ideas. Of this definition the misfortune is, that, in the explanation given of the object, the object undertaken to be explained, is itself introduced under a disguise.

It may, perhaps, be said to be derived from the diversity between ideas. To a mind to which an idea, and no more, was present, one smell, for example, or one taste or one sound, no such idea could, it should seem, present itself as an idea of time.

Condillac, in his *Traité des Sensations*, took a statue, and, having taken a leaf out of the

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book of *Pygmalion*, endowed it successively, as we have seen, with the several senses, at first one by one, afterwards in such groups as it occurred to him to collect them into for that purpose. Neither from any one smell, nor from any one taste, nor from any one sound, nor from any one feeling, supposing it diffused all over its body, could this statue of his, form, it should seem, any such idea as that of time. From a single object of sight, perhaps yes; viz. supposing the object of sight spacious enough to present different parts, subtending, though it were ever so small an angle, coloured or not coloured, the surface would present distinguishable parts; and, during one portion of time, supposing the attention of his statue applied to one part—during another portion of time to another, here, it should seem, would be ground sufficient for her building on it an idea of time.

To our statue thus borrowed from the ingenious Abbé Condillac, neither by one smell, nor by one taste, nor by one sound, nor by one feeling, whether universal or local, could the idea of *number* be suggested. But correspondent to any one of those senses, suppose two sensations, then it is that the idea of number presents itself, or, at least, is capable of presenting itself to her mind. What, if at all times, she had one sensation of each kind and no more,—still it should seem no idea of number; coalescing, the whole assemblage of sensations would form, altogether, no more than one.

In regard to the sense of sight, whether it presented her or not with the idea of number, would depend, it should seem, on the figure of the surface by which the angle formed by the pencil of rays, on entrance into the eye was subtended. Suppose it circular, no difference anywhere, no number; suppose it triangular,—here would be three points, by each of which a different idea might be produced, and thence the number three.

Of figure, the idea is not derivable but through that of number. It may be received, 1. From sight; 2. From feeling. Witness the blind.

Of quantity, the idea may be derived, 1. From number without figure; 2. From figure without consideration of number; but the idea of figure cannot be derived without that of number.

Of these eight abstractions, six, viz. 1. Place; 2. Motion; (viz. relative motion;) 3. Time; 4. Number; 5. Figure; 6. Quantity;—in a word, all but vacuity or *void space* and rest, have furnished so many distinguishable branches of science,—branches, let us say, of Choristoscopic Somatology, each of them already furnished with a separate name, how far soever from being uniformly apposite and expressive.

I. *Sciences having for their Subject the Predicament of Place.*

Topography, a term confined in its customary application to small portions of the surface of our earth, though, with equal original propriety, applicable to any portion or portions of the whole universe.

Chorography, a term not much in use, but, when in use, applied to portions larger than Topography is commonly applied to.

Geography, a term exclusively and necessarily as its etymology shows, confined to this our earth, and subject to that limitation, applicable to any portions, so they be not so small as that the propriety of the application shall find on the part of *Topography* a ground or pretence for disputing it.

By Uranography, or, still better, by Uranognosy, rather than Astronomy, may that branch of Topography, taken in its largest sense, which remains after the substraction of Geography be designated. Uranognosy rather than Uranography; because, while on our earth the situations of its several parts, with relation to each other when measured upon a large scale, are never observed to undergo any considerable change, those of the bodies of which the whole universe is composed, are, as far as observation or indication may be depended upon,—are all, with relation to each other, in a state of constant relative motion; and, accordingly, their relative situations undergoing continual change.

Uranognosy, or even Uranography, in preference to Astronomy, because, by the word Astronomy, a needless separation is made of the bodies which, whilst some perceptibly, others imperceptibly, are continually moving in their boundless field.

II. *Sciences having for their subject the Predicament of* Motion.

Had it happened to this Predicament to have been customarily taken for the subject of contemplation in its whole extent, *i. e.* under all the applications capable of being made of it to particulars, Kineciology, or Kinematology, or some such word, might have been the name allotted to it.

Taken in its whole extent, however, it presented not any such identity or unity of interest as to give occasion to a portion of science having exactly those same dimensions.

In the case, however, in which the motion is considered as receiving its direction from the hand of man, whether its origin be or be not derived from that source, it has received principally from the pens of French philosophers a name of its own, viz. *La Dynamique*, —with an English termination, Dynamics. Δυναμις is the Greek word for *power*, and it is by direction given to motion, that is, to *matter* in a state of *relative motion*, that mechanical power is produced and employed.

Of the field of Dynamics, a great, but scarcely a determinate, portion is occupied by Mechanics, taken in the narrowest sense in which it is commonly employed.

When motion, considered in the case in

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which it has its origin in volition, in animal volition, is excepted, motion in every other case has for its cause or shape that to which the name of *attraction* has, since the time of Newton, been applied, or its opposite and antagonist, repulsion.

In other words, to one or other of these heads, or both together, will be found referable every motion which, for the purpose of Technology, has been employed or regarded as capable of being employed in addition to, and in aid of, animal force in the character of a *primum mobile*.

It is by the balance between the several modifications of attraction on the one hand,* and of repulsion † on the other, that the relative situation of the particles of the several bodies, one amongst another, and thence the weight and texture of those bodies respectively are determined.

III. *Sciences, having for their Subject the Predicament of Time.*

By chronology, *events*, in so far as a persuasion, more or less intense or decided in affirmation of their existence, has been suggested by appropriate evidence, are presented to our view; events, considered as the word itself imparts with reference to time, with which is also commonly connected a reference to *place*.

In so far as in addition to the events themselves, nakedly considered, intimation is given of accompanying circumstances, in so far as they have appeared material, and therein and therewith of the real or supposed causes and anti-causes, instruments, agents and counter-agents, principal and accessory, chronology takes the name of history.

According as it takes for its subject the transactions of political states, or other aggregate bodies of men, history is either aggregate, commonly termed *general* or individual, *i. e.* if taking for its subject what has been supposed to have been done and experienced by this or that individual. For the designation of individual history, the appellation commonly employed is the Greek-sprung word biography; literally, the delineation of life.

IV. *Sciences, having for their Subjects the Predicaments of Number, Figure, and Quantity.*

Among the three predicaments respectively designated by these three names, the nature and intimacy of the relation that has place, has already been brought to view. Of figure, the modifications are scarcely conceivable, nor, accordingly, clearly expressible, otherwise than by means of number; whilst quantity is a predicament including both, and, therefore, still more abstract than either.

By the Greek-sprung word *posology*, the science of quantity, may, it is believed, and if so, now for the first time, not inappositely be distinguished.

Melomorphic, or say, morphoscopic, and amelomorphic, having regard to figure, and not having regard to figure; to the one or other of these denominations will the whole contents of the field of posology be found referable.

Of posology, the melomorphic, or morphoscopic branch has found in the word geometry, (measurement of the earth,) a denomination altogether familiar, but far from being co-extensively expressive. In the practice of measuring the earth may be found the origin of this branch of art and science, as well as one of its great uses. But besides the earth, it is, moreover, employed in the measuring of the rest of the visible universe. Not unfrequently, in the measuring of imaginary and unexemplified extension, *i. e.* in the measuring of nothing at all; and it is when thus employed, that those, by whom it is cultivated, seem most proud of it.

Oristic, and aoristic, or more expressively, oristicosemeiotic and aoristicosemeiotic, determinately and indeterminately expressed—to one or other of these denominations, will the whole contents of the field of amelomorphic posology be found referable.

Of amelomorphic posology, the oristicosemeiotic branch has always had an appellative, no less apposite and expressive, than familiar in the word *arithmetic*, i. e. the art and science which has numbers for its subject,—the art of applying numbers to use, including the science of the properties of numbers, the aoristicosemeiotic, in the Arabic-sprung word algebra, an appellative not much less familiar, but altogether inapposite and unexpressive.

For the designation of the branch of art and science, for the designation of which the word posology has been as above proposed, the word familiarly employed, is, as every one knows, the word mathematics,—a word not altogether inapposite, but, in an enormous degree, uncommensurably expressive. For in its original language, of what is it that the word is expressive? of everything that is ever learned, neither more nor less. But for this abuse, in the designation of the class of intellectual exercises, by which a lesson is got, the adjunct mathematic would, in consideration of its familiarity, have been employed. But in the constantly erroneous conception, of which, in consequence of the abusive extension thus given to it, it could not have failed of being productive, an exclusive negative was found opposed to the use of it.

Applied and unapplied.—According to another principle or source of division, may the field of posology, taken in its whole extent as above sketched, be divided.

* Attraction of gravitation, attraction of cohesion, and chemical attraction,—electrical, and galvanical, and magnetical included.

† Repulsion exhibited in the clusters of bodies, whether in a solid, liquid, or gaseous state. Ditto, produced in all these several cases by the addition of caloric.

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Instead of *applied*, *mixed*, instead of *unapplied*, *pure*, are the terms in familiar use.

In so far as by *pure*, neither more nor less is expressed or suggested than with reference to some correspondent object unapplied to, and thence unmixed with, it is simply and coextensively synonymous with unapplied, and in so far not pregnant with error and delusion.

But here steps in imagination; and forasmuch as in their physioplastic state, most objects are found in a state of combination with others, and all objects have a tendency to combination with others, while, at the same time, for many useful purposes, it is necessary to have them in a state as free from combination as possible, (whether to the end that they may be applied to use in that state, or that for the purpose of being applied to use, they may be made to enter into new combinations;) and, whereas, the bringing them into, or keeping them in, that state, is very commonly a work of more or less considerable difficulty, as well as labour and expense; thence it is, that to this fundamental idea of the absence of combination, imagination, by means of the association of ideas, has attached the accessory sentiment of approbation, which, being indiscriminating, has given to its application an extent more or less outstretching that which, by the precept of utility, would have been marked out for it; inasmuch, that through no inconsiderable part of the extent given to the application of it, the word *pure* is synonymous to *useless*.

V. Of Space and Rest.—Of these predicaments,—of these supremely abstract and comprehensive appellatives, two have been mentioned, viz. void space or *vacuity*, and *rest*, (i. e. relative rest, absolute, there being none, of which, in any instance, the existence is either known or probable,) which are not of the number of those which have become the subjects of so many correspondent branches of art and science.

Of the exceptions thus constituted, (to the general rule,) the cause seems not unobvious; presenting no variety, no change, neither of them is a source of use, nor, on any other account, an object of curiosity.

Pathematology, by this name may be designated the science of psychology, in so far as pleasure or pain are taken for the subjects of it,—applied to pleasure, it will receive the specific name of *Edonology*,—applied to pain, that of *Odynology*.

But for pre-established associations, *pathology*, as equally apposite, would, in respect of brevity, have furnished a preferable name. The appellative, however, has been employed by the art and science of medicine, and after being shorn of a great part of its import, confined to a corner of the field occupied by that science.

Pleasure and pain being the only objects possessed of intrinsic and independent value, simple perceptions, perceptions, if any such there were, altogether unconnected with either pleasure or pain, would have no claim to attention, would not, in fact, engage attention, would not be comprehended within any part of the field of art and science.

In general pathematic feelings, *i. e.* pleasure or pain, and apathematic feelings, *i. e.* simple perceptions considered in so far as separable from pleasures and pains, are experienced together,—are simultaneously concomitant. But although instances are not wanting in which as on the one hand perceptions might be found unaccompanied with pleasure or pain, so also, on the other hand, if not pleasure, pain at any rate, unaccompanied with any perception distinguishable from itself.

But abundant are the instances in which a simple perception, which has neither pleasure nor pain for its contemporary adjunct, may, through the medium of attention, reflection, volition and transitive action, reckon feelings of both sorts in abundance among its consequences; and hence it is that, except for clearness of intellection, the distinction between pathematic and apathematic perception becomes void of practical use.

Simple perception, simple remembrance, enjoyment, *i. e.* sensation of pleasure;—sufferance, *i. e.* sensation of pain,—attention, reflection, examination, judgment or opinion or judicial determination, volition, volitional determination, internal action, external action,—all these, on one and the same occasion, indeed on most occasions, all these several accidents are taking place at the same time; but, in the way of abstraction, for the purpose of science, any one of them, every one of them, may be, and has been, detached from the rest, and held up to view, and subjected to examination by itself. So many of these incidents as are capable of being distinguished from each other, so many compartments or separate fields are included within the vast all-comprehensive field of psychology.

In the production of the events of which it is the scene, the state of the mind is either active or purely passive—purely passive in so far as the will bears no part in the production of them—active in so far as in the production of them, the will has had a perceptible and efficient share.

When in the production of the result the will has had a perceptible and efficient share, the field in which that result has had place has either been confined within the precincts of the mind itself, or has extended beyond those precincts;—in the first case, the act to which the will has given birth, and in the production of which its efficiency has consisted, may be, and actually has been, termed an *intransitive* act, in the other case a *transitive* one.

In so far as the will is concerned in the production of any result, the field of the corresponding branch of science which takes cognizance of such result, may be termed the field of *Thelematology*.

In so far as either the will has borne no

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part in the production of the result in question, or the field of its operation has been confined within the precincts of the mind,—the field of the corresponding branch of science may be termed the field of *noology*. Passive, or purely passive noology, when in the production of the result the will has had no share: —active, in so far as in the production of the impression made and correspondent change produced in the mind, the will has borne a share.

Thelematology, or thelematognosy, has pathematology for its basis. It is by the eventual expectation of pleasure or pain that in every case the will, and thereby the agency, internal only, or internal and external together, are determined. It is by the idea of pleasure or of exemption from pain, considered as about to result from the proposed act, that the volition in pursuance of which the act is performed, and consequently the act itself, is produced.

In the character of *ende*, and in the character of *means*, in that double character it is that pleasures and pains or their respective negatives are continually presenting themselves, not pain itself, but its negative, *i. e.* exemption from pain is the end; but in the character of a means, pain itself operates, as well as its negative—pain itself as well as pleasure.

What dynamics is to somatology, the practical branch of thelematology, or the art of giving direction to volition, and thereby to action, is to psychognosy or psychology,—it may be termed psychological dynamics.

From somatology and psychology taken together, eudæmonics, or the art of applying life to the maximization of wellbeing, derives its knowledge of the phenomena belonging to human existence considered as applicable to that its purpose. In the one word Deontology may be comprehended the knowledge, in so far as by art it is attainable, of the course by which, on each occasion, those means may, with most advantage, be rendered conducive to that common end.

In the field of Deontology, as thus explained, will be found included the several fields of Ethics, meaning private Ethics or morals, internal government and international law.

If on ground so thorny and so slippery inquiry could be warranted in expressing itself with that intensity of persuasion, that fulness of assurance which is included in the import of the word *knowledge*, the field of deontognosy would be the more expressive denomination for the designation of the field of this branch of art and science. In that case, Deontognosy would be the knowledge of what, on every occasion, is by the person in question proper* to be done.

Were it not for the extent thus given to Deontology, upon a great part, not to say the greatest part of what has been advanced and written on the subject of Ethics, of government and of international law taken together, an exclusion would be put.

Of Deontology, the field is either private or public, and for the division of the science itself these adjuncts may accordingly be made to serve.

Intransitive and transitive, to one or other of these denominations will the whole contents of the field of private deontology be found referable. Intransitive, in so far as that individual, and no other, whose agency is, on the occasion in question, the object of consideration, the person for whose guidance the inquiry is made, is the party whose wellbeing is taken into consideration and included in the account. Transitive, in so far as in the account in question, the wellbeing of any other individual or individuals, is considered.

National and international, to one or other of these denominations will whatsoever belongs to the subject of public deontology be found referable: national, in so far as in the consideration of the effects of the act or course of conduct which is in contemplation, in the list of the persons whose wellbeing is taken into account, all the members, rulers, and subjects, taken together, of the political state in question, all these, but no others, are taken into this account. International or universal, in so far as the wellbeing of the members of all other political states taken together, or of this or that individual member of such foreign political state, is taken into the account.

When, in so far as the person in question is considered as occupying the situation of a member of the ruling few, the art and science of deontology will coincide with the art and science of government, within the field of which art and science is included the art and science of legislation, together with what remains of the field of government after abstraction made of the field of legislation,—which remainder may be designated, as it commonly appears to be, by the appellation of the field of administration.

As, for its end to pathematology,—so it is to thelematology, and thence to psychical dynamics that deontology looks for its means.

Section III.

Uses of the foregoing Divisions.

To what purpose all this ramification, all these divisions, subdivisions, and sub-subdivisions, to what purpose all this neology? The words which to everybody are so familiar, of which the application is so easy, why seek to disturb the possession they have so long held of the field of art and science?

* Of this word *proper*, with its conjugate *propriety*, and its quasi-conjugate *unfit*, the use made has for its causes, efficient as well as rational, the desire of including whatsoever has been advanced on the subject, without as well as *with* regard to the effect producible in respect of wellbeing, by the course of conduct which on the several occasions has, under the notion of its propriety, been prescribed or recommended.

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Answer,—to enable you, whomsoever it may concern, should you ever happen to be in the humour, not only to complete an all-comprehensive view of the field of art and science, but also an observation of the mutual relation and connexion of its several compartments, and their respective contents; at the same time to show in what way those contents are respectively of a nature to be regarded as interesting, and as such, as qualifying the whole system to make an adequate return, for any such labour as any person may feel himself disposed to employ in the examination of it.

This view, this observation, the assemblage of names in use,—so long as they are employed to the exclusion of a connected and consistent system of nomenclature, such as the foregoing has endeavoured to render itself,—will not suffer to be taken.

In the first place, as to the principle or source of division. The point of view in which it places the whole field is not merely the most interesting in which it is capable of being placed, but the only one to which in itself the appellation of interesting can with propriety be applied. Unless in so far as it means conducive to wellbeing—to the maximization of the aggregate mass of pleasure—to the minimization of the aggregate mass of pain, the word *interesting* is devoid of meaning.

In the next place, as to the denominations, divisions, and subdivisions, and the names given to the results.

It is only by a correspondent set of apposite names, that the relations that have place between different objects can be instructively and conveniently expressed, and thereby as far as by general words can be done, the nature, the true and distinctive nature, of those several objects made known.

By the most and all-comprehensive term of every system, those properties are expressed which are common to all the individual objects which are understood to be designated by, and comprehended in, the import of that universal appellative. Divide that aggregate into two parts, taking care at the same time that, in one or other of those parts, every individual comprehended in the whole shall be included,—by the names respectively given to those two parts, whatsoever properties are peculiar to the contents of each in contradistinction to the contents of the other, are designated. But in so far as, in addition to all those properties which it has in common with other objects, those which are peculiar to itself are known and understood, the nature of the object, be it what it may, is understood.

In addition to that vast assemblage of common properties which is designated by the universal name, the greater the number of the divisions and subdivisions which are thus made,—while to the two lesser aggregates forming the result of each act of division, apposite denominations, expressive of a property by which the contents of each of the two compartments are distinguished from those of the other, are attached,—the greater the number of those successive acts of division, the more clearly each one of the individual objects contained under them is rendered distinguishable from every other, with which, but for the distinctions thus brought to view, it might have been in danger of being confounded.

Such is the use of apposite names, now observe the inconvenience produced by inapposite ones.

Of their inappositeness, the consequence is, that, in conjunction with the ideas which they are employed and intended to present to view, they are continually presenting to view others which are quite different, and which, in so far as on the occasion in question, they are annexed to the words in question, are productive of constant confusion and frequent error.

True it is that originally, *i. e.* antecedently to established associations, neither appositeness, nor, consequently, inappositeness, are among the properties of language. For giving expression to any idea, any and every combination of sounds or figures, is as apposite as any other. But in so far as between ideas on the one part, and sounds or visible signs on the other, associations have already been formed, then in so far it is that inappositeness as well as appositeness has place: with relation to the idea which for the first time it is employed or about to be employed to designate, a term is *apposite* when, in virtue of the family connexions with which it is already provided, it has a tendency, upon the first mention, to dispose the mind to ascribe to it properties, whatsoever they may be, by which that object is distinguished from other objects: it is inapposite, in as far as in virtue, and by means of such its connexion, its tendency is to dispose the mind to ascribe to it, instead of the properties which are thus peculiar to it, others which it is not possessed of, or at any rate which are not peculiar to it. Thus of appositeness on the part of the appellative, on the part of the mind to which it presents itself, correct at least, if not complete conception, is at first sight the natural result: of inappositeness, conception always more or less incomplete, and frequently altogether incorrect and erroneous.

In the above analytical sketch, the *dichotomous, bifurcate, two-pronged* plan of division is that which it may have been observed, has all along been endeavoured to be employed. The ground and reason of this choice are as follows.*

* Here follow general reasons for preferring the dichotomous mode of division, similar to those which will be found at length, *supra*, p. 102, *et seq.* These are omitted; but the continuation, though containing some repetitions, is valuable as a more minute practical illustration than the author elsewhere gives of the application of the system. Table V., attached to Chrestomathia, exemplifies the dichotomous division; and the Porphyrian Tree, referred to in the text, is exemplified in Table IV. —*Ed.*

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In the instance here brought forward on the occasion of the first divisional operation, the dividend taken in hand was the aggregate composed of all bodies whatsoever. By the first operation performed on it as above, it was divided into two condivident portions, to one of which all bodies in which the property of life is to be found were referred, to the other all bodies in which that property is not to be found.

Take then any individual body for example. It being referred to the aggregate, distinguished by the adjunct *animated*, if that adjunct be with truth and propriety applied to it, what we learn thereby is, that it is possessed of all those properties the aggregate of which is designated by the term life.

Proceed now and perform an ulterior, viz. the next ulterior divisional operation. Taking for the dividend that one of the two condivident portions for the designation of which, on the occasion of the first divisional operation, the word animated was employed. For the principle or source of division, take, on this occasion, the property designated by the word sensation; on this, as on the former occasion, dividing the aggregate into two portions or heaps, throw into the first heap all such individuals in which this ulterior property is to be found, leaving for the second heap all those in which it is not to be found.

In this way, to the information which concerning the individual or species in question is conveyed, by referring it to the several appellatives, body and animated body, may be added this further information, conveyed by the referring it to the ulterior additional appellative, *sensitive animated body*, or to omit the intermediate adjunct as unnecessary, (since if the divisional process have been rightly carried on, *i. e.* upon the exhaustive plan as here described, then if the object in question be sensitive it cannot but be animated,) to the shorter appellative sensitive body.

Thus much for theory. But the sort of information thus conveyed does it end in theory? Is it inapplicable to practice? If so it were it would be useless; if so it had been deemed, no such labour as has here been bestowed upon the endeavour to render it intelligible would have been expended upon it. But far indeed is it from being devoid of use. Correspondent to, and in every considerate mind determined by, the properties which it is found to possess, is the manner in which the object, be it what it may, requires to be, and will be dealt with.

In one of his newly visited, and at the same time conquered countries, Alexander was one day taking a walk in a wood. Aristotle was in his company. Pointing to something on the ground, which had caught his attention,—"What is that?" said the monarch. "A leaf," answered the philosopher. "A leaf, say you! why, you see it moves." "Indeed, and so it does. It is not a leaf, it is an animal; it is a particular species of insect,—the leaf-caterpillar. I must deal with it accordingly, if it be the pleasure of your majesty to have it kept." A little further on,—"There is another odd thing," cried the conqueror; "that stick, it seems to be, that is just by you. Do so much as pick it up." "Gladly," replied the naturalist, "had I durst. That stick, as it seemed to you, was a serpent, and one of the most deadly sort; I have crushed it and killed it, or by this time it would have killed me."

Take any object at pleasure, and at the same time take any property at pleasure, to that same object either that same property does belong, or it does not. This property belongs to that object,—this property does not belong to that object. The two propositions are, with reference to each other, termed contradictory ones. To whatsoever object applied, both of them cannot be true; one or other of them is sure to be so.

Hence may be seen the convenience of that plan of division, according to which, in one or other of the two compartments or condivident portions into which, at each step, the dividend is divided, every particular contained under the name of the dividend is sure to be found. If the dividend thus assumed be that one object by which the whole field of art and science is occupied and covered, proportioned to the number of operations which, under this plan of division, can be performed with truth, the nature of everything contained in that field is gradually developed; and in proportion as it is developed, clearly and thoroughly expressed and made known.

This being the case, the consequence is, that in so far as the observations, in pursuance of which the properties in question have been ascribed to the object in question, are correct, truth will be the property of every proposition by which an object is referred, to any one of the heaps and correspondent compartments thus formed. At every step, be the individual or other particular object what it may, so it does but belong to the universal, all-comprehensive aggregate, which stands at the top of the system, to one or other of the heaps or compartments thus formed, it cannot but belong, and at the same time it cannot belong to both of them. Hence it is, that so long as the divisional process proceeds upon this plan,—so long it is that of the whole contents of the universal, all-comprehensive aggregate, no one item is omitted; which, in other words, is as much as to say, that the plan of division is all-comprehensive and exhaustive; that the whole stock of materials contained under the appellative by which the universal aggregate is designated, is all along exhausted to furnish the matter on which the operations are successively performed.

Instead of bifurcate, two-pronged, suppose the plan of division, for example, trifurcate, three-pronged. So long as it remains in this state, the test of all-comprehensiveness, as

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above, not being applied to it, so long it is, that whether it be all-comprehensive, whether the whole stock of the matters contained in the dividend be, or be not, lodged in these three condivident portions, and in that way the dividend compartment drained and exhausted of its matter, remains unindicated. If the conditions necessary, as above, to the rendering the division all along exhaustive, have been fulfilled, then so it is, that in itself, and in truth, exhaustive it will be; but in this case, though by the supposition it be exhaustive, yet this is more than it will be shown to be, and, in so far as seeing depends upon showing, seen to be.

Minerals, vegetables, animals.—Here of the all-comprehensive aggregate, designated by the word bodies, we have three condivident portions, which are the result of a division of the three-pronged kind,—minerals, vegetables, and animals, subjects of so many *kingdoms*, formed by some logician when in a poetic mood for the containing of them. Now, so it does happen, that by these several appellatives taken together, all individual bodies whatsoever are designated, and thereby, in the allotment thus made of subjects to and for the three kingdoms, the population of the whole empire, out of which portions were taken to people the dominions of these same three kingdoms, was and is exhausted. Of this exhaustion, the proof may be afforded, and has been afforded, by the application of the test of exhaustiveness, as above described and exemplified. But this is more than either is announced by the name thus given to them, or would be announced in and by any tabular view, in which, without any intimation given of the two dichotomous divisional operations, of which these three compartments are the results, they were exhibited in the character of so many portions of the all-comprehensive aggregate, into which, by one and the same operation, that aggregate had been divided.

So, again, with regard to indication given of properties distinctive, as well as of properties aggregative; points of difference, as well as points of similitude; that minerals, while agreeing with vegetables in being bodies, disagree with them in not being endued with life; that vegetables, while agreeing with animals in being endued with life, disagree with them in not being endued with sensation. All this, from one source or other, we know, or upon a moment's instruction may be made to know, —such of us as are acquainted with the application made of these general names to individuals; but of this, by the names themselves, no intimation is conveyed. By the term vegetable, what is indicated is,—that vegetables possess a species of life, viz. the vegetable species of life, but that, in addition to this faculty, the other faculty of sensation is not possessed by them. Of this property, (life, viz.,) though equally belonging to them, no indication, useful and instructive as it would be, viz. by serving to distinguish them from animals, to prevent their being regarded as possessed of a property, of which they are not in truth possessed, is afforded.

This example, though, of any that could have been found, it is, by reason of its familiarity, the fittest for conveying, in relation to the plan of division and arrangement in question, a clear and adequate conception, is, by that very reason, the least fit for giving, at least to a cursory view, an adequate conception of its utility; that which, when applied to other subjects, it is so exclusively qualified for making known, being, in this instance universally known without it.

The further the operation is continued, in other words, the number of steps taken, in and by the performance of it, the longer and more complex would be the names thus given to the continually lesser and lesser aggregates, which, by this division, are obtained. In a synoptic table, an instrument designed for the eye rather than the ear, this inconvenience may, under favour of a well-adapted language, remain for some time almost imperceptible; but in a running discourse, a discourse designed for the ear, as well as the eye, it would probably become intolerable. In ordinary discourse, therefore, at the second, if not at the very first, operation, the necessity will be felt of substituting, in the instance of each aggregate, in place of the two-worded appellative exhibited by the table, a single-worded one. Thus, in English, to the two-worded appellative *material substance*, on the occasion of the first division made of the import of the universal appellative *body: a fortiori* to the three-worded appellative *living material substance*,—a single-worded appellative, so it were that the English language (as do the Greek* and Latin† languages) afforded one;—*a fortiori*, again on the occasion of a second division to the three-worded appellative, *insensities living body*, or the four-worded appellative, *insensitive living corporeal substance*, will require to be substituted another single-worded appellative, such as plant or vegetable, and so in the case of the opposite result of this same division, viz. animal.

On this occasion the logician finds himself under the obligation of employing the same sort of expedient as, on a similar occasion, is wont to be employed by the algebraist, who to a heap of *a's*, *b's*, and *c's*, mixed up with a heap of *x's*, *y's*, and *z's*, forms to himself, in the shape of a single *s*, a concise and most commodious substitute.

At every step taken in the track of exhaustive division, the condivident aggregates, or two prongs which are the result when added to the divided aggregate which forms the stem, exhibit a definition, and that of the *regular* kind, a definition *per genus et differentiam* of the two aggregates thus brought to view.

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* Ζωον. † Vivus.

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Thus, in the Porphyrian tree, the two terms living and lifeless, present, when added to the term body, the definition of any term in the import of which the import of either of the two terms respectively employed for the designation of them shall be included.

True it is, that in relation to this instrument of instruction, thus much must be confessed, viz.

1. That it is an instrument, for the due handling of which no small quantity of mental labour, coupled with no slight portion of knowledge, and no small degree of correctness on the part of the judgment, are necessary.

2. That in respect of the stock which it requires of those qualities of which they being, when separately taken, so rare, are, when in conjunction, consequently so much more so, the number of the divisional operations employed, and consequently the number of aggregates, one within another, which are the result, must perforce receive a pretty early limitation.

3. That in so far as error creeps in, instead of the true and clear instruction which it is in its nature to convey, false instruction and confusion will be conveyed by it.

4. That such error will be liable and apt to be the result, wheresoever, previously to the fixation of the two condivident appellatives, the test of exhaustiveness, as above described, is omitted to be applied to the result of the division which has been made.

5. That though, if it were possible for every race of individuals, or even for every individual object comprehended in the aggregate in question, to be included in the view given of the contents, our acquaintance with the contents would be by so much the more perfect, and the table thereby so much the more useful, yet it is to a comparatively very small number of divisions, and thence to a correspondently very small number of articles constituting the results of these divisions, that the usefulness, and even that the practical application of this useful instrument will unavoidably be found confined.

6. That accordingly, the faculty of making use of it with advantage, will be found confined in its application to the largest aggregates which the nature of things affords, as well as to a small number of the steps which, in the course of the divisional plan, might, by possibility be made. The greater the labour, the complexity, and nicety, of the operation, the fewer the occasions on which, with an effect advantageous upon the whole, it can be employed.

But of these observations, what is the result with regard to this instrument? Much the same as with regard to gold,—not that it is of no use—not that it is of no value; but that the getting it for use is an affair of no small difficulty, and that, accordingly, of the whole number of occasions on which a man would be the better for employing it, and would accordingly be glad to employ it if he could, it is but in a small part that he is able to employ it.

7. That though to maximize the instructiveness of the partition, it is necessary to render it demonstratively and manifestly bifurcate, in which case, at each operation, the numbers of parts into which the whole aggregate is divided, will be no more than two, yet to the number of the directions in which, or sources of division from which, the whole may thus be successively divided, there is no limit. In the direction of the sections, at right angles to that direction,—at any angle other than a right angle,—in any one or more of these ways may an *orange* be divided, yet in each instance into two, and but two parts, and thus far even into equal ones, not to speak of the infinity of the modes into which it may be divided into two unequal ones.

Of this diversified plan of bifurcate and exhaustive division, this division from several sources,—the use is to reach such general terms as the usage of language has established, and therewith exhibit the several relations which the objects respectively designated by them, bear to each other, viz. in so far as the aggregates which they respectively serve to designate, have been so made up, that, if the course of the division were confined to one direction, the nature of the case would not admit of any such course being carried on upon the bifurcate and exhaustive plan, as would take them in.

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NOTE BY THE EDITOR.

THIS Essay, as well as that on Grammar, which immediately follows it, are edited from the collection of MSS. on psychological subjects, mentioned in the editorial notice to the Essay on Logic, (*supra*, p. 212.) They will be found occasionally to embrace matter not generally included in the respective subjects by other authors, being by them usually referred to rhetoric or criticism. Both the works are in a fragmental state. The outlines seem not to have been fully developed, and many parts projected have not been completed. From the pencil-markings on the margin, the Author seems to have intended to include his observations on Grammar within an extensive work on Language, when the other departments should be completed on the same scale. In the state in which the MSS. were found, there was a convenience in presenting the portions more directly bearing on Grammar in a separate form, as they could not be symmetrically incorporated with the portions relating to the other departments of the subject of Language. To the reader, however, both tracts will naturally present themselves as *disjecta membra* of some greater work; and indeed the Author seems to have designed to incorporate them in his great treatise on Logic.

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ESSAY

ON

LANGUAGE;

NOW FIRST PUBLISHED, FROM THE MANUSCRIPTS

OF

JEREMY BENTHAM.

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LANGUAGE.

INTRODUCTION.

USES TO WHICH, IN THE CHARACTER OF ENDS, THIS ESSAY IS DIRECTED.

Practical, and *speculative* or theoretical, in both these points of view will the matter of Language be here considered—in a speculative point of view, to what end? Answer: to this end, viz. that the objects, for the accomplishment of which it is considered in the practical view, may be the more effectually attained. On this occasion, as on all others, suppose no practical good attainable, speculation is without use and without value.

It is, therefore, no otherwise than in virtue of its relation to practice, that the speculative survey proposed to be taken of the matter in question is of any use. But if, by its relation to practice, the speculative survey be subservient to practice, it is then itself of practical use, and the difference between the practical survey and the speculative vanishes; and so, in effect, it does, in respect of everything but vicinity to use, to actual and particular use. To particular use, that part which is distinguished by the name of practical is most immediately subservient; that which is termed speculative in a manner not quite so immediate, it being only through the medium of the practical part that it is so.

Thus much being premised, I proceed to bring to view the order in which the principal and most comprehensive topics, viz. those in which, taken together, all others will be included,—will follow one another in the ensuing pages.

I. Modes or forms of which discourse or language has been found susceptible, viz. audible, visible, and their respective substitutes.

II. Uses of language, 1. Primary or social, viz. communication of the matter of thought from mind to mind. 2. Secondary or solitary, viz. 1. Recordative of the matter of thought; 2. Improvement of the matter of thought and language,—improvement of thought, viz. always with a view to action, otherwise the improvement is but imaginary, not real.

III. Operations performable in relation to discourse or language, viz. 1. Employing in the ordinary manner; 2. Choosing for use; 3. Learning; 4. Teaching; 5. Improving.

IV. Different occasions on which it may be desirable that language should be respectively applied to the several sorts of uses to which it is applicable, viz. 1. Simple information, applying to the conception; 2. Probation, applying to the judgment; 3. Gratification, applying to the sensitive faculty; 4. Excitation, applying to the will through the medium of the affections and the passions.*

V. Properties desirable in the matter of which language is susceptible.

This will be determined by, and bear reference to, the several preceding topics, viz. 1. Modes or forms; 2. Uses; 3. Operations; 4. Occasions.

Of these properties, the following list will, it is hoped, be found not to want much of being a complete one:—1. Clearness; 2. Correctness; 3. Copiousness; 4. Completeness; 5. Non-Redundance; 6. Compressedness; 7. Pronunciability; 8. Melodiousness; 9. Discibility; 10. Docibility; 11. Decorability; 12. Meliorability; 13. Impressiveness; 14. Dignity; 15. Patheticalness.

VI. Different degrees in which these several desirable properties are possessed by the principal and best constructed languages in use.†

VII. Means by which, in so far as the particular language employed by him admits of the possession of them, these several desirable properties may, on each occasion, be secured by the individual by whom the matter of language is employed.

VIII. Explanation of the several parts of speech, *i. e.* of the different modifications of the matter of language corresponding to the several modifications of thought, for which,—as often as to any considerable extent, thought comes to be communicated, whatsoever be the subject and the occasion,—expression requires to be found, and for which signs must, in every language, be provided; and, accordingly,—whatsoever be the difference between the sign or signs employed for the designation of any given import in this or that language, and the sign or signs employed for the de-

* No farther exposition of this head has been found among the MSS.—*Ed.*

† No exposition of this head has been found among the MSS.—*Ed.*

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signation of that same import in this or that other particular language,—are accordingly furnished.*

CHAPTER I.

MODES OR FORMS OF WHICH DISCOURSE OR LANGUAGE HAS BEEN FOUND SUSCEPTIBLE, VIZ. AUDIBLE, VISIBLE, AND THEIR RESPECTIVE SUBSTITUTES.

Section I.

Definitions.

The word Language is wont to be regarded in three different senses.

I. As an instrument employed in and for the interchange, or say, communication of ideas between man and man; and this without distinction as between [different societies among men] or regard had to the particular occasion on which, or the particular purpose for which, it is employed,—call this the information-regarding sense.

II. As considered with a view to certain particular occasions, and to the several purposes for which it is employed or employable on these several occasions. Call this the occasion and purpose-regarding sense.

III. As employed to designate the different collections of signs which have been or are employed by different societies among men for giving expression to these same ideas. In this sense it is employed for the purpose of bringing to view the difference between languages ancient and modern, and the languages employed in and by the different nations by which the earth is inhabited, as, for instance, the English, the French, the German, and so on.

Language, considered in the most extensive sense of the word, is the aggregate of the matter of discourse actually employed, or capable of being employed, by all individuals of the human kind taken in the aggregate.

Considered in its next most extensive sense it is the aggregate of the matter of discourse actually employed by all the individuals of this or that portion of human kind taken in the aggregate. In this sense, when spoken of, it is spoken of by the name of a language.

To constitute a language, a portion of the matter of discourse must suffice for the purpose of whatsoever intercourse between individual and individual, is necessary for the continuance of the existence of each individual, and that of the species.

In general, language† is seldom considered in any other point of view than that of an instrument of communication,—an instrument employed by one mind in making communication of its contents to another mind.

But, upon an attentive view, it will be found that, when perception has been excepted, of all the several distinguishable faculties of the human mind there is scarcely one in the use of which it is not habitually employed,—scarcely one, which without it, would be exercised with any considerable advantage to any considerable extent.

Section II.

Signs employed in Discourse—audible, visible, and their respective Substitutes.

At a stage a certain degree advanced in the career of civilisation, man has two perfectly distinct and different modes or instruments for the fixation of thought and the conveyance of it from mind to mind. The one, that in which,—on the part of him whose design it is to make the communication, the instruments employed are measured, or, as they are termed, *articulate*, sounds, produced by organs which, in man, are, in a peculiar degree, adapted to that purpose,—on the part of him by whose senses it is the intention of the utterer of these sounds that the communication so made of them should be received, and on his mind the requisite impression should be made, the corresponding organs of hearing: these, accordingly, may be termed *audible* signs. The other, that in which, on the part of the author of it, the instruments employed are perceptible characters, and, on the part of the intended receiver, (with the exception of the particular case in which the appropriate organ is deficient,) the instruments put in exercise are the organs of sight. These, accordingly, are termed *visible* signs.

That the signs which address themselves to the ear were the first in use, several considerations concur in rendering manifest.

One is, that the audible form is alike natural to mankind and to the inferior animals. The visible, though, as experience testifies, not altogether incapable of being employed by man in his intercourse with some of the most intelligent species of animals, is not, as far as

* The completion of this proposal, in so far as respects the abstract connexion between the actions of the mind and their typification in language, will be found considered in the last chapter of this work; but in so far as respects the practical explanation and analysis of the various parts of speech, the object will be found better fulfilled in the immediately ensuing tract on Universal Grammar.—*Ed.*

† This name is not properly applicable to any but audible signs; Letters are visible signs of audible signs; not so all Chinese characters.

To a deaf man there exists not any audible language; to a man born blind, as well as deaf and in consequence dumb, there would not exist any means of mental intercourse. In respect of intelligence, he would be inferior to the most meanly endowed among quadrupeds.

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appears, at any rate, in a degree approaching to that in which the audible is, natural to any of them. Another proof is, that of all the denominations by which, in any of the civilized languages, this mode of communication is designated, the organs of speech are the only ones by which it is ever, in any direct way, designated. Witness this very word language, derived, as it is, from the Latin name for a tongue, *lingua*. Witness, also, the other word, *speech*, by which, from what root soever derived, the audible form, and that to the exclusion of the visible, never fails to be presented.

True it is that, for the designation of both alike, there exists in the English the word *discourse*, which word is moreover derived from the Latin word *discursus*, having, for its logical conjugate, the verb *discurro*. But of the verb *discurro*, the original import is by far, more extensive, and, at the same time, less appropriate. By it is meant, to run over, or to run on, and, accordingly, so far is it from being, in any sufficient degree, on all occasions appropriate, that, on many occasions, notwithstanding the seeming contradiction, even in speaking of discourse in its visible form, it has been found necessary to put aside that appellation, and, instead of it, to employ the word speech or the word language.*

For two purposes, it was necessary that, at this early period, the distinction between these two forms should be brought to view.

One is, that of making out and rendering complete the list—that list so important in a practical point of view,—the list of the properties desirable in language. Among these some will be seen, or, at any rate, one, the application of which is confined to the audible signs of language.

Another is, that of being necessary to the purpose of forming and conveying a distinct conception of the solitary use of language, this being, as to a considerable portion of it, confined, as already intimated, to the visible signs of language.

Hence, in answer to the question,—what is meant by language?—necessarily included is the answer to the question, what is meant by signs?—for signs are the elements of which language is composed.

These signs, then, are, in the first place, either, 1. Evanescent, or, 2. Permanent. Into the two classes thus designated, may be divided the whole aggregate of these signs.

This is the primary distinction to which those others, which there will be occasion to bring to view, are subordinate.

Evanescent signs are those of which words pronounced by the mouth are composed, those which address themselves to the ear. Permanent, are those which address themselves to the eye.

For the most part, that is to say, in the language of most nations, the permanent visible signs are themselves but signs, as it were, of the second order,—signs of those same audible signs which, in the language of these countries at any rate, were the sole primary signs of which language, at its origin, and for an immeasureable extent of time thereafter, was composed.

I say in most languages, for an exception there is, viz. that which is consituted by the Chinese language.

Principal and subsidiary,—into the two classes thus designated, may be divided the whole aggregate of these signs. By principal, understand those which, in the ordinary state of the human senses, are employed; by subsidiary, those which, in the case of the extinction of any of those senses, are employed as substitutes to the above principal ones. Of the latter class, the signs chiefly in use, if not the only ones that have ever been in use, are those of which the finger language is composed.

Partly for their own sake, partly in respect of the light capable of being thrown thereby upon the field of language, considered as applied to ordinary purposes, three particular topics, which may be considered either as subordinate, or as collateral, with reference to that principal topic, present a claim to notice. These are, 1. short-hand; 2. signals; 3. cyphers; 4. signs,—employed, or employable, in the government of brutes.

Short-hand has for its object the reducing to such a degree the time necessary for the committing to written signs the words of an oral discourse, as to enable a man thus to give fixity to the whole of it without loss.

Signals, cyphers, and signs, have for their objects one or other, or more, of the following results, viz. 1. producing despatch; 2. surmounting distance; 3. preserving secrecy.

Section III.

Subjects of Discourse.

Of discourse, the only immediate *subject*, is the state of the communicator's mind; in other words, of some one or more of the faculties belonging to it. Of this proposition, the truth, it is believed, will presently be made apparent.

The faculty, the state of which is thus declared, may be either the *active* faculty, (to which belongs the *volitional* faculty,) or the passive faculty.

If it be the volitional branch of the active faculty, the discourse, in and by which expression is given to it, will be—a wish, a command, a request, or a petition.

If it be a branch of the passive faculty, that branch will be—the perceptive faculty, the re-

* For example, in speaking of the instrument of communication in the forms in which it exhibits itself in different nations; you cannot say—the English discourse, the French discourse,—you find yourself under the obligation of saying, the English language, the French language.

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tentive faculty or memory, or the judicial faculty or judgment.

If it be the perceptive faculty—(in every case except that of a sensation produced by an external body, by operating on the touch) —the object or subject by which the sensation is produced,—the object, the action of which is the exciting cause, cannot but be present and in action at the time of the expression, at the time of the declaration made; for if that object be not present, the faculty, the state of which is declared, cannot, if the declaration be true, be any other than the memory.

Of the cases in which the faculty, the state of which is declared, is the perceptive faculty, or of the case in which it is the retentive faculty, no separate consideration need be made; for seldom, indeed, is either the perceptive or the retentive faculty in exercise, or operated upon, but an act or exercise of the judicial faculty is mixed with it.

There remains for consideration the judicial faculty: when concerning the state of the judicial faculty, a declaration is expressed,—the existence of a persuasion in some shape or other,—an opinion, a belief in relation to some object or other, is thereby expressed.

This object, the declared subject of this persuasion, will be the state either of the communicator's own mind, or of some exterior object or aggregate of exterior objects,—exterior, viz. in relation to his own mind.

The portion of time, *in* or *in relation* to which, the state of this exterior object, or aggregate of objects, is considered and declared, will, with reference to the portion of time in which the declaration is made, be either present, past, or future; or all those, or any two of those portions of relative time.

The exterior objects, concerning which such declaration is made, will belong either to the class of *persons*, or that of *things*, or to both these classes.

In regard to motion and rest, the state in which, at any such given point of time, they are thus considered as spoken of as existing, will be either a quiescent state, *i. e.* a state of rest, or a moving state, *i. e.* a state of motion.

The objects in question, any such as are considered as appertaining to the class of things, will either be such as are endowed with the volitional faculty, or such as are destitute of that faculty.

When considered as the result of motion, any state of things is termed an *event*.

Considered as having had for its cause an exertion of the *volitional* faculty, whether on the part of a person or of a thing, an *event* is itself termed an *action*, or is considered as having *action*,—an *action* for its cause.

It is only through some *sense* or senses, *external* or *internal*, i. e. *physical* or *psychical*, that anything can be *known* to a man; or, (to speak more correctly,) that, concerning any object, or aggregate of objects, any persuasion can be obtained.

In so far as it is from *his own* sense or senses, external or internal, that the persuasion which, on the occasion in question, is expressed by the communicator on the question, is represented by him as obtained, the persuasion is said to be *indigenous;* in so far as it is from a declaration made, or supposed to have been made, by any other person, that the persuasion so expressed is represented as being derived, it may be styled an *adoptive* persuasion.

The existence of any expressible state of *things*, or of persons, or of both, whether it be *quiescent*, or motional, or both, at any given point or portion of time, is what is called *a fact*, or a *matter of fact*.

In so far as the act of the perception, the memory, or the judgment, the existence of which is, in and by the discourse delivered by the communicator in question, represented as being the result of the exercise, not of his own faculties, but of the faculties of some other person, the declaration so made by the communicator in question, is termed *a report*,—a report made concerning the state of the things or persons which is therein and thereby averred and declared.

In this case, and thus far, the whole of the subject of the report as declared by the reporter,—the only matter of fact of the existence of which, by such his communication, the communicator as such declares the existence,—is the matter of fact that to the purport in question, at the time in question, (if mentioned,) a declaration was by this other person made.

At the time of the communication made, that which is declared as being present to the mind of the communicator, is neither more nor less than a recollection, or rather, more correctly, the persuasion of the existence of a recollection,—a work of the memory, by which, the fact of his having, at the time in question, by means of one or more of his senses, received and obtained a perception of the matter of fact so described as above, the description of which is,—the fact that at the time in question, by the person in question, a declaration to the purport or effect in question was made.

To the declaration of the existence of such recollection, or rather, of the existence of a *persuasion* of the existence of such recollection, may, or may not, be added as it may happen, a persuasion affirmative or disaffirmative of the supposed matter of fact, the existence of which was the subject of the report in question, supposing such report to have been made, as according to the recollection it was made.*

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* Inference,—1. The impropriety, folly, and insolence of the communicators representing any such communication as being anything more than a persuasion,—an *opinion* of his own. 2. That discourse is nothing but a persuasion; that human persuasion is fallible, and, moreover, all declarations by which

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CHAPTER II.

USES OF LANGUAGE.

When, in the state at which, in a civilized nation, as far back as history reaches, the subject of language is contemplated, two perfectly distinct, howsoever intimately connected, uses of it will be found observable; these may be termed the 1. purely self-regarding; 2. extra-regarding; the object of the latter, the *communication* of thought; the object of the other, the *improvement* of thought. The one whose object consists in communication, may be termed the *social* use: the other, for distinction's sake, though not less than the former, capable of being ultimately subservient to social purposes, yet not being immediately so,—the *solitary* use.

The extra-regarding or social, and that alone, is the use to which language is indebted for its existence; it was, for a long time, not only the only use actually made, but the only one which was even so much as in contemplation. For the purpose of communicating ideas were the several portions of the matter of discourse first employed. Of the solitary use, even to this day, no instance is recollected, in which, in the character of a separate use, completely distinct in its nature from the former, any notice has in print been taken. The practice of applying the mind to look, as it were, into itself,—to look at its own ideas, by means of the words to which they stand associated, is the practice of man as he exists in a state of *society* comparatively mature. Meditation has not been among the purposes to which language, in the earliest state of society, has been applied.

As to the *social* use, it is, in its nature, already as familiar as it is in the power of words to make it.

By the self-regarding, or solitary, or say communication-not-regarding use of language, understand that use which the matter of discourse is of to the individual in question, relation had to his own ideas, independently of that use which supposes communication made, or about to be made, by one individual to another or others.

This use may be thus expressed—Serving, to the ideas associated with the several correspondent words or combinations, as so many *anchors* by which they are fastened in the mind.

In regard to these two uses, the first observation that occurs is, that of the two different instruments capable of being employed to the social purpose, viz. audible signs and visible signs, the visible signs are those which are in a pre-eminent degree better adapted and more subservient to the solitary purpose than the audible.

By means of these, the individual is able to record the ideas that arise in his mind, or that he gathers up in his communication with others, and is enabled, at any future time, to take them for the subjects of meditation or improvement.

In regard to language, two perfectly distinguishable functions may be observed—the intransitive and the transitive.*

In respect of its intransitive function, it, as it were, amalgamates itself with thought—it forms no more than a sort of clothing to thought.

In respect of its transitive function, it is the medium of communication between one mind and another, or others.

This communication may convey information purely, or information for the purpose of excitation, say—more simply, and, when as above explained, not less precisely—information or excitation: to one or other of these ends and purposes, or both, will language in every case be directed.

In so far as *information* is the end, the understanding is the faculty upon which, in the instance of the person by whom the import of the discourse is intended to be conceived, who is principally addressed, and intended to be operated upon,—in so far as excitation is the end, the will.

To the purpose of simple communication neither in act nor in wish need the philanthropist wish to apply any restriction to the powers of language. Of such communication, evil, it is true, may be the subject as well as good; but, in the mixed mass, good, upon the whole, predominates; and it cannot be rendered apt for the one purpose without being rendered proportionably apt for the other.

Considered as applied to the purpose of excitation, the case may at first sight present itself as being, in some respects, different. In regard to passion, and thence in regard to affection, which is but passion in an inferior degree, and always liable to be raised to higher degree, repression, not excitation, may appear to be the object to be wished for: passion being, in every part of the field, the everlasting enemy of reason, in other words, of sound judgment, *alias* correct and all-comprehensive judgment.

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the existence of a persuasion to any effect is affirmed, more or less probably false, such falsity being either accompanied or not with self-consciousness; these are among the truths which, whether it be for the exclusion of obstinate error, or for the exclusion of arrogance, over-bearingness, obstinacy, and violence, ought never to be out of mind.

* This division appears to be equivalent to that above made into solitary and social. The two divisions were made at different times, as appears from the dates on the MSS., and they are thus probably a different nomenclature applied to the same operation; as, however, there is an important subdivision of the "transitive function," which is not carried out in the case of the "social use," it was thought right to keep the two operations of divisions distinct.—*Ed.*

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But even to the lover of mankind, an acquaintance with the powers of language, even when applied to this dangerous purpose, is not without its use: for by the same insight by which the mode of increasing its powers in this line is learned, the mode of repressing them when, and in so far as applied to pernicious purposes is learned along with it. In the case of moral, as in that of physical poison, an acquaintance with the nature and powers of the disease is commonly a necessary preliminary to an acquaintance with the proper nature and mode of applying the most efficient, and, upon the whole, the most benignant remedy.

CHAPTER III.

OPERATIONS WHICH, IN THE CHARACTER OF AN ART, ARE PERFORMABLE IN RELATION TO DISCOURSE, OR LANGUAGE IN GENERAL.

1. Learning. 2. Using or employing. 3. Teaching. 4. Improving or ameliorating.—These are so many operations capable of being performed, and the three first at least actually and continually performed in relation to everything that bears the name of art.

The order in which these several operations are brought to view, or in which their names are made to precede each other, is (it will readily be observed) the order of priority in respect of performance. Whatsoever be the operation in question, a man must have learned to perform it before he can perform it; he must have known how to perform it before he can teach it, and thereby enable another to perform it; and unless it be by some extraordinary and extraordinarily felicitous accident, he must not only have learned it, but be in use to practise it, to practise it in the state in which he finds it, before he will be able to make improvements in it, *i. e.* to raise it up to a higher and better state than that in which it had happened to him to find it.

To a first glance, as applied to all these several operations, the observation seems to present the aspect of correctness. But upon a closer view, to confine it in every part within the pale of truth, it will be found to require sundry limitations, but for which it would be liable to give birth to errors of such a nature as to exercise or practise a pernicious influence.

1. The truth of it is throughout confined to the several operations taken singly, of which the vast aggregate called by the name of the art in question is comprised. Of those particular operations, it will, in almost every instance, happen that a number, more or less considerable, may be found, of which one and the same person may, in one and the same day, or even hour, while he is occupied in learning one, be occupied in practising, with advantage, a second, teaching a third, and making improvement in a fourth.

2. From a too extensive and unlimited adoption given to it as applied to learning and practising, has arisen that most pernicious and foolishly devised clog to productive industry, the English statute concerning apprenticeships.* Be the art what it may, how (it was asked) can a man practise it well unless he have learned to practise it? Therefore, be the art what it may, seven years shall he have been employed in learning it before he is allowed to practise it.

3. Applied to the art of *teaching*, considered in its relation to the operation of *learning*, and, at the same time, applied to language considered as the particular subject of these general operations, it has ever been pressing, and continues to press, as a dead weight upon the intellectual branch of education. To learn it, has been said, is the duty of the ignorant; to teach is the privilege of the knowing, the skilful, the learned, the advanced in age. Assign to those who are destitute of instruction the function of administering it; unite in the same individual the opposite and incompatible functions of *scholar* and *master*,—the consequence is too obvious to require mention, and almost two ridiculous to admit of it!

At length, by bold experience acting in despite of superficial wisdom, the discovery has been made that, for the function of teacher, he who, at the same time, and in the same seat of instruction, is acting in the character of learner, is not merely in as high degree adapted, but in a much superior degree.

Applied to the operation of making improvement, considered in its relation to that of learning, to that of practising, and even to that of teaching, this same effusion of superficial wisdom, is an instrument which, in the hands of envy, the offspring of imbecility and indolence, is never-failingly employed in the endeavour to nip in the bud the blossoms of active genius. Its language is—be the art what it may, not merely to teach it, but even to practise it in the perfection to which it has, in these times, been brought forward, (not to speak of merely learning it,) requires all the ability that a man of consummate talent can hope to possess. Who are you who pretend to improve it?—who are you, who, not content with equaling, pretend to have risen above those whom the whole world admires as seated on the highest pinnacle of eminence?

It is the same instrument which, in the hands of the ruling few, self-clothed in the robe of superior wisdom, is employed in covering with contempt the claims and exertions of the subject many.

Applying to art in general, these same instructions would be found applicable, with indisputable propriety, to that master art, *the art of discoursing*, of which the product is *dis-*

* 5 Elizabeth, chap. iv. The portion of this statute that relates to apprenticeship is repeated by 54 Geo. III. cap. 96.—*Ed.*

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course itself or *language*. To the art itself,—to the fruit or produce of it,—to the instrument of it,—to all these distinguishable, howsoever intimately connected, senses, are both these words, discourse and language, wont to be applied.

Teaching, learning, practising, or *choosing for use,* on the occasion of the use made of the names by which these several operations, considered as having language for their common subject, are designated, the state in which language is tacitly and impliedly considered as being taken in hand, and made the subject of the operation, is the exact state in which it happens to be at the time—by *improvement*, in so far as it is considered as taking place, the language is considered as being brought out of *that* state into a *better*.

A language like any other work or subject,—a language is *good* in proportion as the several *qualities* which, on any account, are *desirable* in it, are found to be in it.

In the instance of *language*, what those qualities are, it will be the business of the next chapter to endeavour to show.

As to *improvement*, it has two distinguishable *subjects:* 1. The work itself, language; 2. The several other operations, viz. *teaching, learning,* and employing, performable in relation to that work.

Of these operations, *teaching* and *learning* are correlative; and, for the reception of any improvement, of which the mode of performing them is susceptible, they must wait hand in hand. But, in both these instances, improvement considered as applied to the instrument itself, and improvement considered as applied to the mode of *teaching* and *learning*, are perfectly distinguishable.

In regard to employing, on the occasion of improvements, relative to the *employing* the work, improvements considered as made in the work itself, and improvements considered as made in relation to the mode of employing it in the character of an instrument of discourse, will be apt to coincide, and become difficultly, if at all distinguishable.

CHAPTER IV.

PROPERTIES DESIRABLE IN A LANGUAGE.

SECTION I.

Division and Enumeration of Desirable Properties.

Of what use (it may be asked) is this topic language and languages, each particular language, and the aggregate mass of signs composed of all languages put together, are everywhere what they are. Every man must take them as he finds them. By no man, be his own language in particular, be all languages in general, ever so ill adapted to the ends of language, say, in one word, ever so bad, can any of them be made better than it is.

To a considerable extent these observations will be found no less just than obvious, not but that some points, however, will, it is supposed, be seen, in relation to which observations may be brought to view, such as will be found not altogether unproductive of, or incapable of being applied to, practical use.

1. Occasions are not altogether unexampled in which a man has the choice of the language he will make use of. On such occasions, if any doubt should arise which of them to employ, he will be able to satisfy himself which of them, on the occasion in question, is best adapted to his purpose.

2. Be the language, in the use of which he has been principally bred,—be, in a word, his native language, what it may, it may be of use to him to be apprized in what degree the qualities desirable in language are possessed by it. Why? That in respect to them he may employ it to the most advantage,—that he may, on every occasion, be able to endue his language with these several desirable properties, and that in the proportions which, on the occasion in question, are best adapted to use.

3. Wild as at first mention the notion may appear, upon the list of these qualities articles may be brought to view, in relation to which improvement may be seen to be a result, the contributing to which, in one way or other, is not altogether out of the reach of individual hands. In so far as, in the instance of this or that nation, the language in universal use shall have been recognised as labouring in a greater or lesser degree under this or that imperfection correspondent and opposite to any one or more of these desirable properties, it may be seen whether in any, and what degree, that imperfection may be susceptible of a remedy, and in what ways and degrees it may be in the power of any individual to contribute to the application of such remedy.

In a certain sense every man has power over his own style; at any rate, whatsoever be the language which he employs, his style is such as he has made it.

A language is the aggregate of the significant signs employed by all the several individuals that use that language.

To know what are the properties desirable in a language is, therefore, to know the properties desirable in the sum of the discourses used by all those several individuals on all the different purposes and occasions taken together, for and on which they can have need to use the language.

Some properties will be alike desirable, or, at any rate, desirable to all purposes and on all occasions without distinction; for other properties the demand applies not to all purposes and occasions without distinction, but principally and exclusively to certain purposes and occasions.

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These properties are distinguishable into three different classes, viz. 1. The *information*-regarding; 2. The *nation*-regarding; 3. The *purpose*-regarding.

I. The *information*-regarding; *i. e.* properties desirable for the communication of the information, for which language is employed; that is to say, whatsoever be the language by means of which it is endeavoured to convey it, the persons by whom, the persons to whom, the occasions on which, and the purposes for which, it is endeavoured to be conveyed.

1. Clearness, as opposed to
   1. Obscurity.
   2. Ambiguity.
   3. Undefinedness, *i. e.* want of distinctness between the limits of the idea designated by the word in question, and the several circumjacent ideas.
2. Correctness.
3. Copiousness, as opposed to scantiness.
4. Completeness, or say, all-comprehensiveness.
5. Non-Redundance—*i. e.* exemption from useless terms, inflections, and modifications, as opposed to abundance in useless terms, inflections, and modifications.
6. Conciseness, or say, compactness or compressedness, as opposed to diffuseness.

II. The *nation*-regarding class of properties, or,—properties desirable in a language in comparison with other languages,—meaning here, by a language, and *the* language, the aggregate composed of all the words habitually employed by a certain aggregate of persons, in whose instance this habit of employing the same aggregate of words for all purposes of social intercourse, causes them to be spoken of as *having* the same language.

1. Pronunciability, as opposed to difficulty of utterance.
2. Melodiousness, as opposed to unharmoniousness.
3. Discibility, or say, capacity of being easily learned.
4. Docibility, or say, capacity of being easily taught.
5. Meliorability, or say, perfectibility, capacity of being easily improved.
6. Decorability, or ornamentability, as opposed to baldness.

III. The *purpose*-regarding class, *i. e.* properties desirable, this or that one of them, or this or that other of them, in the language, or say, discourse, employed according to the occasion on which, and purpose for which, it is employed.

1. Impressiveness, as opposed to feebleness.
2. Dignity.
3. Patheticalness, or say, aptitude for exciting tender emotions.

If the above qualities be termed desirable properties of the first order, those properties which are conducive to the investing a language with this or that property of the first order, may be termed desirable properties of the second order.

Subservient, or, say conducive, to the primary properties of discibility and docibility, are,—

1. Giving expression by means of a small as effectually as by means of a larger number of inflections to the idea in question.

2. Facility of admitting the junction of two or more words into one.

Considered as applied to language in general, that is, to every language without distinction, every one of these qualities is liable to have place in different *degrees*. Not, perhaps, in any one existing language is every one of these qualities possessed in a degree equal to the highest in which it could be conceived to be possessed of them respectively; at the same time, not, perhaps, in the instance of any one of them can it be said, with correctness, that there is any one of these qualities which is not, in any degree, to be found applicable to it.

Section II.

Of Clearness.

With equal right, two distinguishable, though nearly related qualities may claim to be represented by this word, viz. exemption from ambiguity, and exemption from obscurity, both of them negative ones.

1. The case in which *ambiguity* has place, is where, after the discourse has presented itself to, and has been received by, *sense*, two distinguishable acceptations have presented themselves to the mind,—two distinguishable, and accordingly distinguished imports, between which the judgment hesitates, unable to determine which of the two it was that was intended should be presented and received.

By the strict and original import of the word ambiguity, the number of these imports is confined to two,—but in its application this explanation may be extended to any greater number of imports, so as they be determinate. In practice it is seldom between more than two that the mind will have to hesitate.

2. The case in which obscurity has place, is where, after the discourse has been received by sense, the mind, for a greater or less length of time, finds itself unable to fix upon any determinate import, as having been intended to be conveyed; and if, after continuing for a greater or less length of time, the endeavour is given up as hopeless, the obscurity of the discourse becomes, with relation to the individual in question, viz. the individual by whom it is thus taken in hand, converted for a time, at least, into unintelligibility.

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Obscurity, so long as it lasts, may be considered as the superlative or highest point of ambiguity; ambiguity having place to the widest extent. It is not, as in the case of ambiguity in its stricter sense, between two, or some other small number of imports, and these determinate ones, that the mind hesitates, but between *all*, or rather *among* all, imaginable ones.

The greater the number is of the words that are employed in the expression of a given import, the *less clear* is the discourse which they compose. Take an entire paragraph, take any one of the sentences of which it is composed,—to whatsoever purpose the mass of discourse in question is considered as a *whole*, till the last word has been heard or read, and understood, obscurity, of a shade more or less deep, covers every part of it. Such being the case, the sooner the mind has gone over the whole, the sooner this obscurity is dispelled, and the less there is of it, the sooner it is gone through with.

Section III.

Of Conciseness.

The conciseness of an expression is inversely as the number of words employed in the conveyance of the idea intended to be conveyed by it.

The uses of this property are,—

I. When the signs employed are of the impermanent kind, such as words spoken,—saving in the article of time, of time employed in utterance and reception,—in speaking and hearing.

II. When they are of the permanent kind, 1, saving in the article of time employed in reading; 2, saving in the expense of giving birth and preservation to these same permanent signs; in the expense of the substraction and colouring matter for writing, printing, and engraving, or the like.

III. To a certain degree *conciseness*, as above expressed, is contributory to clearness; that is to say, the want of it is contributory to the absence of, or is opposite to, clearness,—is contributory, at any rate, to obscurity, and it may be to ambiguity.

IV. Conciseness is, in many instances, contributory to impressiveness.

V. To apprehensibility.

VI. To retainableness,—thus Horace,

> Quicquid præcipies, esto brevis: ut citò dicta
> Percipiant animi dociles, teneántque fideles.
> *De Arte Poet.*, 335-336.

Two branches of art and science, or say, two subject matters of knowledge there are, in its application to which, the usefulness and importance of conciseness is prodigious. These are, 1, Law; 2, *Posology* or (to employ the word which, unexpressive as it is, is the only one as yet in use) mathematics;—yet prodigious as is this importance, scarcely has it been taken for the subject of observation; and indeed as applied to *posology*, namely to the arithmetical branch of it, it seems to have hitherto altogether escaped notice.

Of the wonders performed by the means of algebra, abbreviation has been one main, not to say the principal, instrument. Abbreviation productive of conciseness,—the act of giving, in a degree more or less considerable, to the discourse in question, the property of conciseness.

That compressedness is of use not only immediately, and on its own account, but mediately and in the character of an instrument of clearness, has been already intimated;—in what way it is so, may now have been observed.

Section IV.

Facility of Utterance, or say Pronunciability.

Though in the field of causality intimately connected with melodiousness, this quality is in its nature, and thence in idea, sufficiently distinguishable from it. In proportion as, to produce it requires effort on the part of the speaker, and on that occasion effort is accordingly employed, the fact of its being employed naturally becomes perceptible, and the existence of it is actually perceived; and in proportion as in the bosom of the speaker uneasiness is, or by the hearer is supposed to have place, by the force of sympathy, the like effect is, in his own bosom, apt to take place.

That in the formation of language in general, melodiousness and facility of utterance, taken together, have actually, in the character of ends, been generally aimed at, is a matter of fact that may be stated as perceptible in the history of some languages, and it is supposed in a degree more or less considerable in the history of every language.

In every known language, in so far as it is known, changes in structure are observable; and in every instance these changes appear to have had for their cause, a general endeavour towards the giving to the instrument of discourse these agreeable qualities in a continually increasing degree.

Section V.

Of Melodiousness, or say Harmoniousness.

By each of these terms is meant the property of producing, through the medium of the ear, a sensation of an agreeable cast in the mind.

Applied to different species of discourse, *i. e.* to discourse considered as employed for different purposes, melodiousness or harmoniousness,* whichsoever be the term, presents two

* In the word *harmoniousness* may be seen a source of ambiguity, from which the word *melodiousness* is free; applied to the aggregates of musical sounds, harmony has, in contradistinction to melody, been in these modern times applied to the case in which sounds more than one are purposely

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ideas somewhat different, though differing rather in degree than in any other particular. In this point of view the opposite ends of the scale may be designated by the terms *positive* and *negative*. A sort of medium being assumed —any point being taken at pleasure, as and for the middle point,—*positive* melodiousness has place when the degree of that quality is considered as being *above* that middle point, *negative* melodiousness, when the situation of the degree in question is considered as being *below* that point.

In the discourse in question, what degree of this quality is required depends upon the nature of the discourse, *i. e.* upon the purpose and the occasion on which the discourse is employed.

1. In the case of poetry, in so far as *rhythm*, *i. e.* the succession of measured sounds, is considered as entering into the composition of it, melodiousness, on the positive side of the scale, is universally understood as essential and indispensable; in the case of the art and labour of the composer, one great object is the securing the undiscontinued existence of it.

2. In the case of that sort of poetry in which rhythm is not employed, and of which the agreeableness is understood to depend on the intercourse between the imagination of the author and the imagination of the reader, melodiousness, in the positive degree, is not of the essence of the discourse; but the quantum of the pleasure produced cannot but be more or less dependent on the degree in which this quality has been conferred on it; and, at any rate, by any positive degree of the opposite quality—unmelodiousness or unharmoniousness—the design cannot but be proportionally counteracted.

3. In the case of *public speaking*—of a *speech* delivered to or before a *public assembly*—though the melody or harmony is of a different cast from what it is of, in the case of vocal music, or even that of poetry, metrical or unmetrical; and though positive harmoniousness enter not here, as there, into the very essence of the purpose, yet to that purpose, as universally acknowledged, of this quality, in so far as obtainable, an extraordinary share, is, in proportion to the degree of it, conducive; and, at any rate, by any such deficiency as leaves the degree below the middle point, the purpose cannot but be, in a proportionate degree, counteracted.

4. In a word, there is not perhaps that imaginable occasion on which, by the degree of harmoniousness or unharmoniousness appertaining to the discourse, its efficiency, with relation to the design of it, be that design what it may, may not in some degree be influenced.

This connexion, viz. between the efficiency of a discourse and the harmoniousness of it, when indicated, howsoever clear and indisputable, is in no small degree apt to be unobserved.

Speaking of the admiration universally bestowed upon Shakspeare, it is to the harmony of his numbers as much as, if not more than, to any other feature of excellence in the works of that author, that Mrs Montague attributes the effect.* When this observation first made its appearance, the character of originality was, it is believed, very generally attributed to it; at any rate, the quality in question presented itself to the author of these pages in that same character, and the observation as one which, though, when once presented, the justice of it was felt, had not till then presented itself to his mind.

produced *simultaneously;* and this for the express purpose of distinguishing the case from that of melody, in which the like sounds are not considered otherwise than exhibiting themselves in succession.

On the other hand, the word melodiousness, if employed on the occasion here in question, viz. *sounds* considered as the vehicles of *thought* and as the instruments of *converse*, seems exposed to an objection from which the word harmoniousness when applied to the same subject is free; by the word melody, the case where the sounds employed are standing with reference to each other in the relation that belongs to the sounds called *musical*, is brought to view; a sort of relation, in which, except with reference to each other in the particular case of their being, as the phrase is, *set to* music, the sounds employed as instruments of discourse do not stand to each other.

Moreover, in this case, in further justification of the use of the word *harmony*, an observation that may be made, is, that in its original acceptation ἁρμονία, the Greek word, of which the English word harmony is a copy, means neither more nor less than *adaptation*, and whether on the occasion of the pleasure derived from a number of sounds, the pleasure derived from simultaneity be or be not added to the pleasure produced by succession, *adaptation* has equal place,—it is upon *adaptation* that the production of the agreeable effect depends.

Section VI.

Of Ornability or Decorability.

Whatsoever be the import intended to be conveyed, by the mere conveyance of that import alone, nothing which can with propriety be termed *ornament*, (unless it be in so far as harmoniousness, and those other intrinsic qualities are considered in that light,) can be given to the discourse by which that import is endeavoured to be conveyed.

Saving the above exceptions, whatsoever therefore of ornament can be given to a discourse, will be given by the conveyance of some ideas which *are not* essential to the main or direct purpose, in addition to those which *are* essential to it. Of some ideas, not essential to the main purpose, will *the matter of ornament* be composed.

Of that matter of ornament, the exhibition and conveyance may be performed either by

* Essay on Shakspeare.

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and with, or even without, addition to the number of the words which, if nothing in the way of ornament were conveyed, or intended to be conveyed, would have been employed.

In what manner matter of ornament, as expressed by additional words designed for that purpose, may be added to discourse, is a topic that belongs not to the design of this work. According to the general nature of the end proposed by the discourse, it belongs to the head of Rhetoric or Poetry.

The case which alone belongs in any way to the present design, is that in which, in and for the conveyance of the ornament, no greater number of words is employed than would or might have been employed, had no such design been entertained, nor any such effect been produced.

Under the present head, one very general observation may have its use.

This is,—that so long as no addition is made to the number of the words that would otherwise have been employed, the addition of any ideas, the effect of which is not in some particular and assignable way of a positively displeasing nature, the effect of which is not to produce uneasiness in some positive and assignable shape, will operate as ornament, and have the effect of producing, *i. e.* at any rate a tendency to produce, pleasure.

Of this pleasure the cause has been already brought to view. Among the qualities desirable in language, that of compressedness has in its place been brought to view. Communication of ideas being the benefit which it is the nature and design of discourse to confer, and the time and labour employed (on the one hand in the *utterance*, on the other hand in the *hearing* or reading, and, in both cases, in the *considering* the discourse) not being increased, the consequence is, that the price remaining the same, whatsoever ideas can, without any addition to that price, be imparted and received, are, with relation to the mind of the receiver, so much clear gain.

The mind is thus led to the subject of *association*—of the associations that have place among ideas.

1. What are the sorts of ideas which, in the character of main or principal ideas, are wont to have others associated with them in the character of accessory ones?

2. What are the ideas which, in the character of accessory ones, are respectively wont to be associated with these principal ones?

3. In what cases association is wont to be productive of an immediately pleasant or otherwise beneficial effect.

4. In what cases, if any, of a pernicious effect?

5. By what means any unpleasant, or in any other way pernicious effect, produced or producible by such association, may be put an end to or prevented?

Section VII.

Of Impressiveness or Force.

By the word *impressiveness* is meant to be brought to view the degree in which, so far as depends upon the general structure of it,—and not upon any particular talent of the individual by whom, on the occasion in question, it happens to be employed, nor yet upon the particular *purpose* for which, on that occasion, it is employed,—the nature of the language in question affords, on the occasion in question, be it what it may, and, with relation to the purpose in question, be it what it may, the means and probability of accomplishing that purpose.

In the nature of the purpose may be seen a circumstance, on which the form in which this quality presents itself cannot but be more or less dependent.

The *time* at which the purpose is designed to be accomplished, what is it with reference to the time at which the discourse is uttered? Is it present or future? If *future*, more or less *near* or *remote?* The faculty proposed to be operated upon, what is it?—the *intellectual* alone, or the *volitional* also? And if the *volitional*, by what *means?*—by the affections in a temperate state, or by the affections operating in a warm or in an inflamed state? In a word, by the *passions?* On the modifications brought to view by these questions, will depend, in some measure, not only the degree, but the mode, of the sort of impressiveness best adapted to the nature of the purpose.

In so far as time *future*, is the time at which the purpose is to be accomplished, and the portion in question of that time is remote, the memory is the subject on which the impression requires to be made; and thus far, as applied to a portion of discourse, *impressiveness* coincides with fitness for being held in remembrance.

If it be on the passions that the impression is proposed to be made, the *present* will be the portion of *time*, more particularly looked to for making it.

Be the purpose what it may, of which of these sorts it may, how it is that the strength, and thence the depth of the impression is influenced by the structure of the language, is an inquiry that will call for consideration as we advance.*

At present, all that seems suited to this place is,—that in most cases impressiveness depends upon, or is promoted by, *clearness*, in so far as *clearness* stands opposed to ambiguity, and likewise, in all cases, by compressedness.

Section VIII.

Of Dignity.

By dignity, is here to be understood, that

* See chap. v. sect. viii.

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quality or character in a man's style, which is the result of its being such as to convey to the hearer or reader the idea of self-possession on the part of the speaker or writer; the idea of his having acquired a mastery over the subject which he has taken in hand, whatsoever it be, or at the least, of his having settled and arranged his thoughts concerning it.

This quality may be termed a secondary one, as being a quality, which is, as it were, a collateral result, produced without any separate and additional causes, by virtue of some of those which are requisite for securing to the style the qualities of clearness and impressiveness.

Of strength of mind on the part of the speaker or writer, dignity of style is a natural consequence, and by that means a sign.

The signs of strength of mind are exhibited in a man's style in greater or less perfection, in proportion as it is clear of certain marks, which may be considered as symptoms of weakness.

Under one or other of two denominations, viz. 1. laxity; and, 2. fumbling; the principal symptoms of weakness may, it is believed, be found comprehended.

1. *Laxity.*—In what improprieties in the choice and arrangement of words ambiguity and obscurity take their rise, have been shown in the several preceding sections. But, as it is with the several other imperfections, which stand opposed to the several qualities desirable in language, so is it with these,—no man, who, with equal facility, could exclude them from his discourse, would leave the marks of them to appear in it and deface it. In proportion, therefore, to the degree in which it is seen to be defaced by these imperfections, is the degree of weakness under which his mind is seen to labour.

In the constitution of the mind, *ambiguity* and *obscurity* of style are symptoms of *laxity* and *weakness*; *clearness* and *impressiveness* are signs of *strength*.

2. *Fumbling.*—This is the natural result, and by that means a symptom of *want of preparation*.

When the field which a man has to travel over is new to him, he finds himself under the necessity of picking up as he goes the *opinions* which he sees reason to deliver, and the *expressions* which, in the delivering of them, he employs. The consequence is, that no sooner has he pitched upon one opinion, and clothed it in such expressions as at the moment have presented themselves, than he finds that, in some way or other, they are deficient in respect of correctness or completeness. Hence come clause after clause, having for their objects the producing the effects of *ampliation*, *restriction*, or *modification*, or, in one word, amendment.

Besides, and *again*, and *this too*, and *moreover*, it is by words of this sort that the symptom of weakness, here called *fumbling*, is betrayed.

In some cases, the seat of this disease may be found in *single terms*; in other cases, the whole proposition, or the whole paragraph, or in a word the whole argument, must be examined before the nature of the disease becomes apparent, and thence before the proper mode of cure can be ascertained.

Instances of fumbling, as perceptible in the character of single terms, are,—species of things picked up on the spot, and brought to view, one after another, in the order in which they have happened to present themselves. If a correct and comprehensive view of the subject had been taken, some generic term, in the import of which, the import of all these several specific terms, or at least of such of them as belonged properly to the occasion, would have been included, would have been employed. By this means, a number of repetitions, equal to the whole number of these specific terms, *minus* one, would have been spared; and if, for greater clearness, it had been deemed advisable to present separately to view the idea designated by these specific terms, or any of them, for producing that effect, so many single words, with the requisite small assortment of connectives for stringing them together, might have sufficed; and instead of being weakened by correction after correction, the first impression would, by so many exemplifications, illustrations, and corroborations, have been rendered stronger and stronger.

Proportioned to the difficulty of adequate preparation, is the degree in which want of preparation is apt to be unavoidable, and thence where it betrays itself, the degree in which it appears excusable. And conversely. —Proportioned to the facility of adequate preparation, is the degree in which evident want of preparation as evidenced by its symptoms, viz. *laxity* and *fumbling* is apt to render itself offensive and discreditable.

In every spoken discourse, in general, want of adequate preparation, is much more apt to be unavoidable than in any written discourse. In a spoken discourse, *laxity* and *fumbling* are accordingly more excusable and less offensive than in a written discourse.

Section IX.

Mutual Relation of the Properties Desirable and Undesirable in Language.

I. Clearness, conciseness, and correctness; with their opposites, obscurity, ambiguity, &c., —their relation.

While obscurity lasts, the signs employed call up no idea signified.

While indistinctness lasts, the sign presents, along with the idea intended to be presented and conveyed, another idea, between which two the boundaries are not defined and ascertained.

While ambiguity lasts, the sign presents,

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along with the idea intended to be presented and conveyed, another idea which is not intended to be presented and conveyed, but between which and the idea intended to be conveyed, the boundaries are sufficiently definite and ascertained.

When incorrectness has place, instead of the idea intended to be presented and conveyed, is presented and conveyed an idea which was not intended to be presented and conveyed.

When, and in so far as non-completeness has place, either an idea or ideas which were designed to have place, or an idea or ideas in regard to which it is desirable that they should take place fail to take place.

Thus it is that comprehensiveness has two senses—a negative and a positive sense, according as the standard of reference is an idea which already has place in the mind of some person or persons, or an idea which, till the discourse in question was uttered, or at least framed, never yet had place; in the first case, the imperfection has place,* and non-comprehensiveness is the name; in the other case perfection has place, and comprehensiveness is the name of that perfection.

In so far as non-conciseness, or say non-compressedness, or say verbosity, has place, utterance is given to signs other than those by which the idea intended to be conveyed might have been expressed, though perhaps in a manner not quite so free from obscurity, ambiguity, and indistinctness, or say indeterminateness.

Compactness supposes ideas more than one: perhaps propositions more than one: opposite to compactness is non-compactness, or say perhaps desultoriness.

In so far as desultoriness, or say non-compactness has place, the propositions or portions of discourse, instead of being placed in contiguity, are placed at a distance, more or less great, from one another, other ideas, one or more, being placed between them.

Between the two desirable qualities of clearness and conciseness there is a perpetual repugnancy, a perpetual competition,—taking each of them at its maximum, even an absolute incompatibility.

Between clearness and conciseness, considered with reference to the same sentence, there exists the same sort of incompatibility as between conciseness considered as a quality of each particular sentence, and conciseness considered as a quality of the whole discourse of which that and the other sentences are component members.

II. Copiousness, Conciseness, Tractibility—their relation.

Of language, the use, and the sole use, being the communication of ideas, in proportion to its copiousness will be the usefulness, and in so far the excellence of every language.

* Viz., If the discourse do not embrace the idea which is made the standard of reference?—*Ed.*

But be the particular language what it will, at no one point of time will it contain within itself a stock of words, such as, without prejudice to the perfection of all these other desirable properties, shall be capable of giving expression to all the ideas for the expression of which a demand is capable of having place at a succeeding point of time. Hence in the property of copiousness, if considered as a constantly existing property or quality, the idea of tractibility is necessarily included.

Opposite to copiousness is poverty or scantiness. Scantiness may be distinguished into *absolute* and *relative*. Absolute is that which has place in so far as for the proposition for which a man has occasion to find expression, no expression can be found by any means; relative, where such expression may indeed be found, but not without prejudice to conciseness, to wit, by the employing, instead of a single-worded term, in the form of a noun-substantive, either a definition or a description, more or less loose and diffuse.

In so far as in language, copiousness is a perfection, scantiness cannot but be an imperfection.

Copiousness may be distinguished into useful or serviceable, and useless or unserviceable.

In respect of any given words, copiousness is *serviceable*, in so far as to the idea or proposition in question, without the employing of that word, expression either cannot be given at all, or not without preponderant prejudice to this or that other one of the properties desirable in language; unserviceable in so far as without preponderant prejudice to this or that property desirable in language, expression may be given to the idea or proposition in question without the employing of that word.

Scantiness and useless copiousness, *i. e.* redundancy, are properties very capable of coexisting in conjunction with one another in the same language.

In the vocabularies of the several arts, liberal and manual, in addition to such as are serviceable, others which, according to the explanation above given to the word, may, with strict propriety, be termed unserviceable, will, in almost every instance, to an amount more or less considerable, be found.

III. Copiousness and simplicity, their relation.

1. As to *copiousness*. This is a quality of a positive aspect, and presents itself as the principal one. The main use and purpose of language is to express *thought*, by the amount of all useful thought for which it is incapable of affording an adequate expression, therefore, any language cannot but be imperfect and inadequate.

This observation will be apt to appear so extremely obvious, that all mention of it may seem superfluous. A prejudice, however, is to be found established, and that in no small force, the harbouring of which is irreconcile-

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able with the acknowledgement of this quality in the character of a desirable one. The word in and by which this prejudice is wont to find utterance is *purity*.

2. Simplicity. In this quality may be seen, as it were, the antagonist of *copiousness*; a language is *copious*, in so far as it is provided, furnished, replete, with useful matter: it is *simple*, in so far as it is unencumbered with matter which, being *useless*, is at best superfluous.

To this purpose, the words of which language is composed may be considered, 1. *Singly* but entire; 2. *Aggregately* as put together in the composition of a sentence: 3. *Fractionally*, i. e. each of them in respect of its component parts. By useless combinations, by words altogether useless; or, lastly, by useless modifications of words, may the simplicity of a language be destroyed.*

But allowing to the quality opposite to the one here in question the character of an imperfection, in what way, it may be asked, is it attended with any practical inconvenience, in a word, with positive uneasiness, or with loss of positive enjoyment?

I answer in this way—Whether it be his own native language, or a language which, with reference to him, is a foreign one, of no part of any language can the use be obtained by a man without labour; and in so far as it is consumed either in the learning or the employing of words or phrases that are without use, in so far is a man's labour devoid of use.†

* In the MS. there is here the following N. B.—Add examples.—1. Terms without use, in many instances technical professional terms,—diversity of names for the same kind of act. 2. Superfluous inflections; example in Greek names and verbs. Cases, moods, and tenses, expressed by different terminations in different dialects. The dual a useless number. 3. Quere as to useless combinations of words.

† The less inflected languages have the advantage over the more inflected languages, not only in simplicity but in force.[a]

In the English, by the separate auxiliary words by which the modifications included in the aggregate of connected words, called by grammarians the *verb*, are expressed, are, with great advantage, performed those functions, in the performance of which, terminations in prodigious number and variety are employed in the more inflected languages, viz. the Greek and Latin, and their modern derivatives.

By means of these same instruments a much higher degree of force or *impressiveness* is possessed by this same modern and northernly derived language.

Witness the words *shall* and *will*; and the most imperiously *imperative* mood expressible by the word *shall*.

Indeed, such is the quantity of verbal matter saved by the employing the word *shall* in its imperative sense, that besides giving to the English, *pro tanto*, a degree of simplicity and force not possessed by any of those southernly derived languages, dead or living, it may almost be said to give to it a degree of copiousness equally peculiar. Why? Because in the expressing by means of the necessary circumlocution the import of the imperative *shall*, so many words would be necessary that the mind has not patience to draw them out, and so they remain unexhibited.

[a] The same modifications which, in the least inflected languages are mostly expressed by separate words termed *auxiliaries*, are in the most inflected languages expressed by inseparable affixes, viz. prefixes or suffixes; mostly by suffixes, more commonly styled terminations.

Section X.

Comparative Importance of these several Desirable Qualities.

Such as above, is that which, in the character of a complete, as well as correct one, has presented itself as a list of the several qualities desirable in language.

Good,—it may be said,—desirable; but in what degree, as compared with one another? All in equal degree, or in different degrees?

Answer,—different and widely distant in the scale of importance will these several qualities, it is believed, upon comparison with each other, be found.

Copiousness and *clearness*, viz. clearness from ambiguity and obscurity,—compared with all the several others, these two qualities present themselves as seated upon a lofty eminence.

1. On the highest point stands *copiousness*. It is only in proportion as it is *copious* that a language contributes anything to its *end*:—to any of the modifications of which the *universal end*, *wellbeing*, is susceptible. Reduce its copiousness, and in proportion as you reduce it, the height of the place occupied by man, in the scale of being, is reduced from that of a member of the best governed and mannered community, down to that of a barbarian, of a savage, of a beast.

2. Next in the order of importance, and at no great distance, comes clearness;—*clearness*, from the two kindred imperfections of *ambiguity* and *obscurity*.

This, however, is but as it were a sort of *negative* quality consisting in the absence of two peculiar imperfections, each of them diminishing, as far as it goes, the benefits attached to copiousness.

3. Upon a yet lower level, presents itself the quality of *impressiveness*,—at any rate if considered by itself, viz. as having place no otherwise than in a case in which, in respect of the article of clearness, no deficiency has place.

A circumstance by which, in so far as importance corresponds with utility, the importance of this quality, viz. impressiveness, may, it should seem, be found to experience no inconsiderable reduction, is its liability to be rendered subservient to pernicious purposes in

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a degree superior to that in which it is likely to be rendered subservient to purposes of a beneficial character;—the greater the intensity of passion, the greater its aptitude to be productive of pernicious consequences, and in the case of a discourse, the object or tendency of which is to operate upon the passions, the greater the degree of its impressiveness, the greater the degree of efficiency with which it is likely to operate upon the passions;—the greater the degree of intensity of the passion which it is the nature and tendency of it to excite.

4. and 5. Simplicity and compressedness,—lower still is the level on which these two qualities present themselves.

Of their utility, that part which is original and intrinsic, and which consists of the saving in time and labour, is comparatively inconsiderable.

The principal part consists of that secondary and *derivative* utility which is composed of, and increased by, their subserviency to the two qualities of primary and *intrinsic* utility, viz. *clearness* and *impressiveness*.

6. and 7. Lowest of all stand the two kindred qualities so nearly allied to purely physical ones, viz. *melodiousness* and *facility of utterance*.

Melodiousness,—still more the absence of the opposite quality, may, in some measure, be considered as subservient to impressiveness, but for this connexion it might perhaps be regarded in no higher character than that of a foreign and accidental *ornament*, not connected with any of the important ends and uses of language, and not having application to it, but in two portions of its field, viz. oratory and poetry.

Even as between these two, viz. melodiousness and facility of utterance,—facility of utterance presents itself as standing on one account, in so far as it has place, in an uncombined state, manifestly and considerably below *melodiousness*. By excellence in respect of melodiousness, other persons besides the speaker or writer,—other persons to the number of which, in the case of the writer, there are not any limits, and in the case of the speaker none but such as are not narrow ones, are gratified,—by deficiency in that same respect, proportionably more or less displeased;—by facility of utterance, in so far as it is separable, and exists separate from melodiousness, one individual alone, viz. the author, is affected, and he only in so far as the discourse being composed of signs of the *audible* kind, it comes accordingly to be made audible.

Section XI.

Of the Qualities desirable in Style, i. e. *in Language, considered as employed by this or that Individual.*

1. Simplicity. 2. Compressedness. 3. Clearness. 4. Impressiveness; and 5. Harmoniousness.—Among the several distinguishable qualities which presented themselves as desirable in language in general, in the whole structure of every language, by whatsoever hands employed, these five presented themselves; to the case of this or that individual, considered as taking in hand this or that language in particular, and applying it to his own purpose, whatsoever be that purpose, these same five qualities will, it is believed, be found alike applicable, and with equal propriety and advantage.

Of the several qualities desirable in the case of language in general, considered without reference to an individual employer of the instrument, there are two others, viz. copiousness, and facility of utterance or say pronunciability, which are not thus applicable.

1. Of these, copiousness seems scarcely to have any application to the case of an individual speaker or writer. In his case copiousness bears reference to the occasion and the subject. Occasions are not wanting with reference to which a sufficient degree of copiousness may be exhibited in the compass of a single word.* In so far as the language which he employs fails of being adapted, adequately adapted, to the subject, the most consummate writer or speaker will not be able to give to his style the quality of copiousness. In the native language of New South Wales, the most consummate master of the language of that country would not be able to deliver an intelligible argument in the English court of Common Pleas, in an action of Replevin, or on what is called a point of Practice.

2. Pronunciability, or Facility of Utterance.—In this we have seen another quality, the applicability of which will be found to be confined to the case of a whole language, in contradistinction to that of an individual considered as making use of it.

In so far as the language in which he expresses himself affords a choice, it will naturally be, especially in this experienced and polished age, among the cares of every well educated man, especially of the poet and the public speaker, to put aside rather than look out for any of those difficultly pronounceable sounds, which the usage of early times happens to have introduced into the language, and that of intervening times to have left in it.

But if, throughout its whole texture, the language abound in sounds of difficult utterance, the utmost possible skill on the part of him by whom it is employed, may be insufficient to give utterance to a discourse of considerable length without suffering uneasiness, and, in his intonation and deportment, exhibiting sensible marks of such his sufferance.

Without much toil to himself, a statesman of the Hottentot country might perhaps, for a considerable time, continue to display his elo-

* The word *away*, for instance.

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quence; but to an European hearer, the idea of continual difficulty, and considerable uneasiness, would all the while present itself.*

One quality there is which will be seen to depend on the individual alone:—on the use made by him of the language, whatsoever it may be. For the designation of this quality no appellative more apt has been found than the word *dignity*.

By the word *dignity*, no such meaning is here intended to be expressed as that which is conveyed by the word *pomposity*.

With or without *dignity*, *pomposity* is a quality that may be given to a man's style by inappropriate choice of words taken singly,—by words selected for the purpose of impressing on the imagination the ideas of grandeur, sublimity, and importance, commonly at the expense of clearness,—words calculated to gratify the ear, with pleasure produced by appropriate melody and harmony.

The quality for the expression of which the word *dignity* is here employed, will be found to depend,—not upon the choice of terms taken singly, but principally or exclusively upon *collocation*,—and that not so much upon the collocation of words taken singly, as upon the collocation of whole sentences, and their component clauses or members.

CHAPTER V.

OF IMPROVEMENT CONSIDERED AS APPLICABLE TO LANGUAGE, OR THE MEANS BY WHICH, IN SO FAR AS THE PARTICULAR LANGUAGE EMPLOYED BY AN INDIVIDUAL ADMITS OF THE POSSESSION OF THEM, THE PROPERTIES DESIRABLE IN LANGUAGE MAY, ON EACH OCCASION, BE SECURED.

Section I.

Questions applicable to Improvements in Language.

To make an improvement, or improvements, in a language, is to cause it to possess, in a higher degree than it does at the time in question, some one or more of the qualities desirable in a language; of these, a list, as complete as it could be made, has already been given.†

An imaginable ulterior species of improvement would be the putting language in general, or this or that language in particular, in possession of some quality, of which, till the time in question, no language was ever possessed. But, if the list above referred to be what it was intended to be—a complete one, on this supposition this imaginary species is incapable of being exemplified and realized.

In connexion with this subject, the following are the questions which seem to call for an answer:—1. What alterations have a just claim to the title of improvements? 2. In what way, and in what manner, have they actually been brought about without design? 3. Whether any, and what improvements are capable of being brought about by design; in other words, in what shape, or shapes, the nature of language admits of improvement? And, 4. By what hands, and in what manner, improvement in these several shapes may be effected or promoted?

Section II.

What Alterations may be deemed Improvements.

Short is the answer which, for this question, may suffice. Of the qualities desirable in language, the following list has been given,—viz. 1. Clearness; 2. Correctness; 3. Copiousness; 4. Completeness; 5. Non-redundance, or simplicity; 6. Compressedness; 7. Pronunciability; 8. Melodiousness; 9. Discibility; 10. Docibility; 11. Meliorability; 12. Decorability; 13. Impressiveness; 14. Dignity; 15. Pathetically. In so far as this list is correct and complete, the answer to this question has been already given.

If the list above given be a complete one, then it is that, in the qualities contained in it, added to their respective opposites, we have all the qualities, good and bad, of which a language is susceptible; and, if so, then will every alteration, to which the name of *improvement* can with propriety be applied, consist in bestowing upon the language,—*i. e.* the aggregate of the words of which the language is composed, one or more of these qualities in a higher degree than that in which it was respectively in possession of them before. After, and in consequence, and in virtue of the improvement, the language will, *pro tanto*, and to the extent of the improvement, be more copious, more simple, more compressed, more clear, *i. e.* freer from ambiguity and obscurity, more impressive, more melodious, more easy of utterance, more ornamental, &c., than before.

Section III.

What Improvements take Place without Design.

Improvements made without design? No certainly; in all the several shapes in which all the several improvements that have ever been made, in none of them has it ever been made any otherwise than with the design of doing what was done. In what sense, then, without design? In this sense,—viz. without any general survey taken of the language; without any such thought as that of doing, on the individual occasion in question, that which, on that individual occasion, was done.

1. Copiousness. For the purpose which the individual had in hand, a new word is thought wanting,—he accordingly makes one.

* The language of that country is said to contain in it sounds unexemplified in any European language, and without a course of labour such as hath never yet been submitted to, not utterable by any European organs.

† See chapter v.

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2. Simplicity. On the occasion in hand, a phrase, a word, a part of a word, which by others had been employed, presents itself to him, but presents itself to him in the character of a superfluous one, or as not better adapted, or as less fit than some other which presents itself at the same time,—he, in consequence, according to the nature of the case, leaves it, or throws it out,—forbears to employ it, or excludes it.

And so in the instance of the several other desirable qualities.*

Section IV.

By what Hands, and in what way Improvements in Language are capable of being effected, or promoted.

Individual and simple practice, individual instruction, free association, government authority,—by these several expressions, so many different hands by which, or so many modes in which, improvement, in this field, is capable of being effected or promoted, may be brought to view.†

In so far as in the nature of the case, improvement is capable of being introduced into language by practice,—by mere individual practice,—any individual may, with more or less prospect of success, take his chance for introducing it.

And by what means? *Answer,*—By clothing the discourse employed by him on each individual occasion, with all the several properties desirable on the part of human discourse; regard being had to the particular occasion on which it is so employed; these several properties being such as are subservient and contributory, to the several ends in view, for which, on the individual occasion in question, language is employed.

If, of these same properties, the above enumeration is complete, then so it is that, of every alteration held up in the character of an improvement, the effect, if that character does in any way belong to it, will be to invest it with those same properties, one or more.

In England, we hear of this or that man, operating in his individual capacity, having made improvements in language. We hear of Voltaire, of Junius, of Burke, of Johnson, of Goldsmith, as having given force to, or put a polish upon, the language of their respective countries.

Now, in what way can these men, any one of them, have made any improvement in the language?—that is to say, in the language employed by other persons, one or more or all? Answer,—Voltaire, &c., writes, other persons in number and proportion, more or less considerable, write, on this or that subject; with or without thinking that they are endeavouring to imitate him, they endeavour to write in the same or a similar manner.

Section V.

Externally applied Instruments of Improvement.

External instruments of improvement for augmentation of the usefulness of the several desirable properties of language, are—

I. For abbreviation of the signs; thence saving in the labour employed in forming, and thereby making use of them.

1. Short-hand applicable and applied to all subjects.

2. Alegomorphic abbreviation,—viz. 1. Figures instead of letter-press; 2. Algebraic characters instead of figures.

II. For diffusion, or say, giving increase to the number of the persons capable of receiving participation in the benefit.

1. Instruments whereby increase is given to the diffusion of audible and evanescent signs:—1. Stentorophic tubes; 2. Pipes, such as those employed in the conveyance of water and gas; 3. Cannon—for, to a limited degree, neither are these hostile instruments altogether incapable of being applied to a peaceable and useful purpose.

2. Diffusion by means of signs visible and permanent, independent of conveyance:—1. Letter-press substituted to manuscript; 2. Manifold mode of writing; 3. Means of presenting to the view of a speaker or writer the words he has need of,—Synonymation, as in the *Gradus ad Parnassum;* 4. Dictionaries, whereby of the idea expressed in this or that language, corresponding equivalents are presented in this or that other language.

3. Diffusion by means of conveyance:—1. Letter-post; 2. Telegraphs, diurnal and nocturnal.

III. Durability—increase given to.

Instruments of durability are engravings in stone or metal.

Section VI.

Rules for Clearness, i. e. *the Avoidance of Ambiguity, Obscurity, and Debility, so far as depends upon the choice of Words taken singly.*‡

Rule I. When the language affords a word appropriated exclusively to the expression of the import which alone it is your intention to express, avoid employing any word which is alike applicable to the expressing of that import, and a different one which may require to be distinguished from it.

Examples:—Substantives, adjectives, adverbs,—in the instance of all these parts of

* There is here a notandum, "go on bringing them to view in the same manner."—*Ed.*

† With the exception of a sentence or two on *instruction*, merely initiatory, *individual practice* is the only one of these that has been found discussed in the MSS.—*Ed.*

‡ For further remarks by the author on the subjects embraced in this and the succeeding section, see Nomography, in vol. iii. p. 233, *et seq.*

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speech, frequent breaches of this rule may be found.

I. Substantives.—1. The word *taste* employed instead of the word *relish*. To *relish* a thing is to taste it with pleasure. Do you relish this peach? In this question there is no ambiguity, not even for a moment. But instead of this, oftentimes we find,—Do you taste this peach? and so in the case of almost any other source of pleasure; for example, a poem, a sonata, a building, a landscape.

In the French language, there exists no appropriate word by which pleasure is represented as an accompaniment of the perception indicated; no word expressive of, *I taste with pleasure*. *Gouter* is *to taste;* and for, *to relish*, there is again this word, and no other. In French, therefore, this imperfection, this ambiguity and inadequacy, this incompleteness, and consequent incorrectness of expression, is the result of necessity. In the word taste, when employed instead of the word relish, this imperfection is needlessly and inelegantly copied. Why? Answer,—from affectation and vain glory, to give the hearer or reader to understand that the speaker or writer is so well acquainted with that foreign language, that it is more readily present to his memory than his own language.

II. Adjectives.—*Either* employed instead of *each*. To the word *either* belongs an exclusive signification, which belongs not to the word *each*. Where the idea of exclusion is not intended to be conveyed, how slovenly and absurd is it not to employ a word by which the exclusion is expressed? Yet of negligence in this shape, examples are continually occurring.

Poetry is the species of composition in which it is most frequent. There it has its excuse,—1. In cases where the monosyllable *each* would *not*, so it may be that the dissyllable *either* will suit the measure. 2. In poetry, distinctness is less requisite than in prose. A uniform distinctness would even be incompatible with the nature of the composition, and fatal to the design of it. To produce and keep up in the mind, confusion, so it be but accompanied with pleasure, is an object not of aversion, but of endeavour and study.

To affectation may the sin against propriety be imputed in this case, as well as in the last preceding one.

In saying *taste*, when he means *relish*, a man pleases himself with the thought of showing how familiarly he is acquainted with the language of *France*.

In saying *either*, when he means *each*, a man pleases himself with the thought of showing how familiarly he is acquainted with the language of poetry.

Affectation the genus, pedantry the species; formerly the dress most frequently worn by pedantry was *Greek* and *Latin;* latterly, it is French and poetry.

To the ambiguity attached to this impropriety, one circumstance alone operates in some measure as a palliative. If so it be, that for predicating what you meant to predicate alike of two things, A and B, the word you have employed is a word by which one of them is excluded: conceive the word repeated, then, one after the other, they are both of them comprised. First introduce A without B, then introduce B without A,—both of them are introduced; but how much better would it not be if, without any such unintended exclusion, both were introduced at once.

All, every, each, either,—these collective adjectives are none of them absolutely incapable of being employed for and instead of any of the rest; but they have each of them its appropriate and most proper sense.

Thus it is throughout, in regard to words which with reference to one another, in common acceptance and discourse, pass for synonyms. Take any two of them; by neither, perhaps, is exactly the same idea expressed as is expressed by the other. In many instances, however, so it is that without impropriety, and without inconvenience, one of them, perhaps either may be employed instead of the other.

III. The word *future* employed instead of the word *subsequent*. *Future* and *subsequent* are both of them names of relations, terms of reference. By each of them, two portions of time, an *antecedent* and a *consequent*, are brought to view. By the term *subsequent*, the point of time brought to view in the character of an antecedent, is that which, with reference to the state of things or transaction *spoken of*, was present; this alone, and not the *time at which* that same state of things or transaction, is spoken of. Thus stands the matter, in so far as concerns the word *subsequent*. In the use of it nothing of ambiguity is to be found.

Now as to the term *future;* but for the context,—from which, upon reflection, it may be concluded that the time from which the futurity is reckoned, was the time when the state of things or transaction spoken of was present,—that time would always be the time in which the discourse, if oral, was spoken, if in writing, was written.

From the promiscuous use made of these two words, suited to very different purposes, confusion and absurdity are continually arising.

IV. Restrictives, such as *alone* and *only*. By these words, what is constantly understood is, that the purpose for which they are employed is the narrowing the import of some word or other to which they are respectively annexed; that which in many cases cannot be collected but from the context, nor from the context without some difficulty, is, to which, of all the words in the sentence, the restriction is meant to be applied.

1. Substantive in the nominative case, (*i. e.* name of the agent.) 2. Adjective agreeing with do., (*i. e.* quality ascribed to the agent.) 3. Verb. 4. Substantive in the accusative

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case, name of the patient. 5. Adjective, agreeing with do., (*i. e.* quality of the patient.) 6. Adverb, in the character of the name of a quality, of a quality annexed to one or other of the adjectives or to the verb; frequently to any one of these, with more or less propriety, may the restriction be considered as applicable.

In English, what thickens the confusion is, the indeterminate character of the restrictives, *alone* and *only*. Each of them is employed sometimes in the character of an *adjective*, sometimes in the character of an *adverb*; to exhibit the different cases in which each, in contradiction to the other, is most proper, would of itself be a task of no inconsiderable length.

Required to exhibit so many forms, by means of which in the several cases, where the restriction is meant to be applied exclusively to the objects respectively signified by several parts of speech, it may in such sort be applied to these several subjects, that no misapplication whatsoever, howsoever transient and momentary, can take place.

To solve this problem would be a task of no inconsiderable length and labour,—but at the same time, of no inconsiderable use.

If of the words alone, and only, the one were always an adjective, the other always an adverb, the difficulty of the task would be much less than it is; but, unfortunately, as has been just observed, no such constant distinction has place.

V. Ordinals: more especially the word *first*.

Of the aptitude of this term to involve in ambiguity the import of the sentence in which it is employed, the causes are of the same nature in this instance, as in that of the restrictives, *alone* and *only*, viz.—

1. Uncertainty of the part of speech, and thence of the subject, to which the attributive is meant to be applied.

2. Uncertainty in regard to the part of speech to which it is meant to be considered as belonging, viz. whether an adjective or an adverb.

Example of the mode in which the ambiguity may be avoided.

1. Ambiguous expression.—Columbus first saw Hispaniola.

2. Correspondent pair of sentences, by which the existence of the ambiguity, and at the same time, the mode of avoiding it, are indicated.

(1.) Columbus was the first person who ever saw Hispaniola.

(2.) Of the islands now called the West India Islands, Hispaniola was the first that Columbus discovered.

The plural number is, in a particular degree, liable to be productive of perplexity and misstatement.

Rule II. For remedy, substitute the singular to the plural number where substitutable without impropriety; and by one means or other it may generally be so substituted.

Rule III. Unless for special reason, by whatsoever name an object has once been designated, by that same name and no other, continue to designate it, or if, on any account, you find it matter of necessity or convenience to employ for that purpose this or that other name, take care to give notice of the change.

Eadem natura, eadem nomenclatura.
Whene'er the same nature,
The same nomenclature.

Converse of the above Rule.—Whatsoever be the object, for the designation of which a given word has been employed, employ not that same word for the designation of any other object; unless so it be, that the word being a generic one, on the first occasion it was employed for the designation of the whole genus or of one species; on the other occasion, for the designation of another species of the same genus.

Rule IV. Prefer verbal substantives to verbs.

Numerous are the instances in which, for the giving expression to the import in question, a single word in the form of a verb, may in some sort suffice, and is frequently made to suffice; and a verbal noun from the same root, with the addition of some verb of extensive sign, and proportionally frequent use may also serve; as when, instead of *to apply*, the phrase *to make application* is used. From this substitution convenience is frequently found to result.

The noun from the same root is commonly a *verbal noun*; a *verbal noun* of that sort, which serves to designate, in the first place, the species of action, for the designation of which, the verb, including all the several adjuncts and modifications* belonging to that complex part of speech is used; and thence, by an almost imperceptible transition, the state of things produced by that same act.

This verbal noun, when thus obtained in a state of separation from these adjuncts, which, form so many parts in the composition of the very complex part of speech called a verb, and which in this its separate state, becomes the name of a sort of fictitious entity, of a sort of fictitious body or substance, is, in this state, rendered more prehensible. Being thus prehensible, it is more easily, and thence, directly brought to view, and being thus brought to view, it is capable of being employed as a common subject to any number whatsoever of

* Viz. The adjuncts designative of the time of an action, the number of the person or persons concerned in it, and the point of view in which in respect of certainty, the act in question was contemplated.

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propositions that may be requisite for predicating, whatsoever the nature of the case requires to be predicated, of the sort of act in question, or of its result.

By means of a few verbs of extensive import, such as the above word *make*, capable of serving, as it were, in an *auxiliary* character, introduction may, in most cases, be given by each of them to a large number of names of fictitious entities, and the advantage in question compassed to the utmost extent, of which it is susceptible.

When a characteristic verb, thus capable of being resolved, into a correspondently characteristic verbal noun-substantive and an uncharacteristic auxiliary verb, has been employed, a practice not unfrequent is, to follow it by some relative which has for its antecedent the verbal noun, the import of which is implied in that of the characteristic verb; subjoining, or not subjoining, to it the antecedent noun thus implied.

Example 1. The implied antecedent brought to view as if repeated.

If you would gain the populace, upon every favourable occasion apply yourself to their senses; *this application* will do more for you than the closest train of reasoning.

2. The implied antecedent not brought to view, but only tacitly and implicitly referred to.

If you would gain the populace, apply yourself upon every favourable occasion to their senses; this will do more for you than the closest train of reasoning.

If the verbal noun, the name of the fictitious entity, have, in a preceding sentence, been expressly brought to view, the repetition of it in the succeeding sentence, will have the good effect of reviving and strengthening the first impression. On the other hand, insert the verbal noun in the succeeding sentence, without having inserted it in the first, the consequence is that, in this way of speaking, a sort of false intimation is conveyed,—an intimation, that the verbal noun employed in the succeeding sentence, had already been employed in the preceding one.

Leave the verbal noun altogether uninserted, the result is still more awkward. "*This will do* so and so;" what is it that will do so and so? To this question no answer being given by the writer, the reader is left to hunt for one.

Rule V.—When, for the designation of the idea in question, no other appellative is in use but one which is tainted with ambiguity, presenting in conjunction with the idea required, another which is different from it, and which, on pain of being led into error by it, must be distinguished from it, or say, seen to be different from it,—substitute another word which is free from all ambiguity, presenting to view no idea other than that which is wished and endeavoured to be presented by it.

Example gathered from the field of penal law.—To acts considered as having been taken for the subjects of prohibition, is universally applied the appellation of *offence*. But when in regard to these acts, the desire is, to present to view the quality, or say, property, on account of which they have been constituted, or it is in contemplation to constitute them, offences; for conveying this idea, no other word is in use than this same word *offence*. By law the act is made an offence,—and why? Answer.—Because in its own nature it is an offence. Generally speaking, the idea, which in this case is associated with the word offence, is that of *maleficence*, that is to say, the property which the act, to which this appellative is attached, has, or is supposed to have, of making a defalcation more or less considerable, from the aggregate happiness of the community. In so far as the greatest happiness principle is the ruling principle, on no other ground can any species of act be taken in hand by the legislator, and by prohibition and eventual punishment, constituted an offence.

This ambiguity, it has seemed to me, matter of high importance to remove. Accordingly, continuing to employ the term offence, for designating the fact of the act having been taken for the subject of prohibition,—for the purpose of bringing to view the quality, in consideration of which it was my desire to see it thus dealt with, I employed the word *maleficence;* giving to the act in which this quality was beholden by me, the appellation of a *maleficent act*.

Once having become sensible of the need there was of a word for this purpose, and having accordingly formed the determination of being on the *look-out* for such an one, I soon found that I had not far to look: *beneficent*, *beneficence*, were words already not only in the language but in every mouth; in the language (the Latin) from which they were derived, correspondent and opposite to them I saw the words *maleficent* and *maleficence*.

Thenceforward, instead of not knowing what to say, unless it were in a roundabout way, or saying, this act is an offence, and therefore ought to be made an offence, it has been my custom to say the sort of act thus described is a *maleficent act*, and *that* in such sort and to such an amount, that by apt prohibition, backed by apt eventual suffering, it ought to be constituted an offence.

Section VII.

Rules for Clearness, and thence for Impressiveness, so far as depends upon Collocation.

Rule I. Wheresoever it is of importance that two objects be distinguished from each other, be careful so to order the expression as to render the distinction between them as clear, *i. e.* the contrast between them as strong, as may be.

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Rule II.—When the two objects belong to the same scale, the difference between them is in degree, and in degree only. In that case, what is to be endeavoured at is, that that which is considered as entitled to stand at the higher degree, shall not be placed at any lower degree, that which ought to stand at the lower degree not at any higher degree, so that the difference of degree may be correctly indicated.

Rule III.—When the objects belong to the same scale, placing in the situation of *contradictory* propositions the two propositions whereby they are spoken of, does not place the differences between them in so *strong* or in so *clear* a point of view as that in which they would be placed by an indication of the degrees which they respectively occupy. Milled corn is not cold; ice is cold. By these expressions, how feebly and inadequately the difference in temperature between the two bodies is represented, is sufficiently manifest.

Rule IV.—When contrast is meant to be exhibited, keep to the same words throughout, till you come to those by which the contrast is meant to be exhibited.

Rule V.—For impressiveness, put not the names of two leading objects in one sentence, unless when they are under the same *regime*. *One thing at a time.*

Rule VI.—Of that idea which is the principal one, and to which in the sentence in question the purpose requires that the attention should be principally attached, put the sign in the first place, or as near the first place as the state of the grammatical relation will admit.

An inconvenience attendant on this mode of collocation is, that it will seldom be that which would be pursued, or without presenting the idea of affectation could be pursued, in oral discourse. It is on this account with reference to the most usual order of discourse, termed inversion.

But the reasons which perhaps would render this mode of collocation difficult and unusual, and thence unpleasant, in oral discourse, do not apply, at least with equal force to written; since in this case for marshalling his words in such sort as to him seems best, a man may then take whatever time is necessary.

Rule VII.—Use antecedent modifications. 1. They prevent instead of correcting misconception. 2. They excite the collateral idea of self-command on the part of the speaker or writer. This is *the*, or *a*, reason why I find it not pleasant to begin a sentence with a nominative case.

Rule VIII.—Every clause not expressly *ampliative* is restrictive.

Rule IX.—When in relation to the clause in question, having the effect of a limitative, ampliative, or in any other way modificative, clause, your intention is that the import of it shall be understood as applying exclusively to some one, to the exclusion of one or more other clauses, the nature of the case affords two expedients, either of which will suffice for insuring the production of the desired effect.

1. It is only in one case that the first of them applies; and that is, when the clause to which it is intended that the modification should be considered as applied, is that which it is intended should stand before any of the others to which it would be capable of being applied. In this case put the modificative clause before the clause intended to be modified; and in this way modificative clauses in any number may be made to precede, and by that means exclusively attach upon one and the same modificand.

2. The other expedient is applicable to all sorts of cases. It consists in inserting the modificative clause within the modificand. By this means it is to this modifiable clause to the exclusion of all other modifiable clauses, that it will be found applicable.

In the wording of acts of Parliament, and indeed in discourses in general, this expedient is pretty generally employed, and that with manifest good effect.

Rule X.—Between an antecedent substantive and its relative, be careful not to interpose any word, capable of being, though it be but for a moment, understood as meant to be taken for the antecedent of that same relative.

Rule XI.—The list of topics given, treat them in the same order,—*change not the order.*

Rule XII.—When of two or more ideas brought to view in the course of the same proposition, sentence, or clause, there is some one to which, whether to the exclusion of, or in preference to, the rest, it is your wish that for the purpose of its being impressed into his mind with a pre-eminent degree of force, the attention of the hearer or reader, to the end that he may take particular cognizance of it, should be pointed, contrive so to turn the phrase, as that the word or words designative of that idea, shall occupy the front of the sentence.

Example.—Say, "When it is by word of mouth that the communication is made;"—rather than, "When the communication is made by word of mouth."

In the latter form, the attention is divided between the consideration of the general fact of the making the communication in question, and that of the particular mode in which that operation is proposed to be performed, and by this division, the impression made by the words indicative of the particular mode is more or less weakened,—in the first form, the attention is without division fastened at once upon the only one of the two objects to which on the particular occasion in question it was meant to attach it; the attention is pointed to one of the two objects in *preference* to the other at least, if not to the exclusion of it.

Rule XIII.—Place not in a strong light,—place not in an impressive point of view, two propositions,—two clauses in the same sentence.

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For example,—a principal clause and a clause which is employed to modify it,—or say a modificative clause.

Reason.—When upon the same level in the scale of importance, two objects are thus placed at the same time, the consequence is, that between the one and the other the attention is distracted; it takes not a sufficient hold of either of them. Present them to the mind one after another, it grasps them with its undivided force.

Section VIII.

Rules for Correctness and Completeness.

Rule I.—Correctness.—The more extensively general the terms you have occasion to employ, be the more careful in examining the species contained under the generic appellation employed, and in considering whether that, whatever it be, which you predicate of the genus, is with truth predicable of these several species.

Rule II.—Completeness, or say comprehensiveness.—When on the occasion of any sort of operation which is productive of beneficial effects when performed in relation to a certain species of subject matters, look round for the several genera within which the species in question is contained, and consider whether with correspondent beneficial effects the same operation may not be performed upon the other species contained in that same genus, all or some of them.

So as to objects analagous to the one in question, without being *congeners* to it. By this means are inventions produced.

Section IX.

Of the Improvement of Language in respect of Copiousness.

General Rule.—Exceptions excepted, the more copious a language the better. New words and new combinations, to one or other of these heads may every improvement of which language is susceptible in respect of copiousness be referred.

In whichsoever mode any addition is made to the pre-existing state of instruments of discourse, the addition is *primâ facie*, and, saving particular exceptions entitled to be set down to the account of improvement.

Particular reasons apart, for the same reason that the first word that was ever invented was an addition to the stock of instruments of enjoyment and security; in a word, to the instruments of wellbeing, so *has* every other been, and so *will* every other *be*.

On this head, therefore, the general rule is, *The more copious a language is, the better*,—the better adapted to the purposes of language.

But to this general rule particular exceptions are not wanting. As to the grounds of these exceptions, and thence as to the rules in cases of exception that have place under this general rule, their place will be found under the head of the next-mentioned article upon the list of qualities desirable in language, viz. *simplicity*.*

Generally speaking, there exists in language a natural tendency to improve itself, or, to speak strictly, to become improved in respect of this desirable quality. The same causes, by the operation of which the earliest and scantiest stock of the instruments of thought and conversation were produced, continue in action, and will continue in action, without end. Observation, experiment, experience, reflection, discovery, invention: all these are so many seeds of language, seeds from which new additions to the stock of words and combinations in every language are continually springing up.

As there exist cases in which the alteration made in language by increase given to the number of words, and combinations of words, of which it is composed, *cannot*, with propriety, be set down to the account of advantage, so are there cases in which, though the addition, if made, is or would be of an advantageous nature, yet, the addition finds the introduction of it opposed, by various springs of human action, by various principles of human nature.

Indigenous weakness, viz. in the intellectual faculty, sinister interest, interest-begotten prejudice, adoptive prejudice; in this part of the field of action, as in every other, will human felicity find these its enemies set in array against it, and opposing its progress at every step; while, in so far as the mode of enrichment is unserviceable in any instance, the interests of all mankind are opposed to it.

Section X.

Modes of Enrichment.

On the occasion of the explanation of the modes in which a language is capable of being enriched, two objects require to be considered, viz. 1. The *source* from which the addition is derived; 2. The mode in which it is made.

Say enrichment *ab intra*, or home-drawn, in so far as the addition is drawn from the same language,—*ab extra*, in so far as it is drawn from any foreign language.

Simple modes of enrichment are,

1. Indication of particular properties as applied to a given genus—as expressed by a generic name of any degree of amplitude. Examples of this mode of enrichment are afforded by the several branches of Natural History and Natural Philosophy.

2. Spiritualization or psychologization, in so far as of any name of any physical substance, operation or quality, application is made to the purpose of giving designation to any cor-

* See above p. 310, and note † attached to it.

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respondent, or supposed correspondent, psychological substance, operation, or quality; the psychological object being modelled from the physical archetype, as a bust in clay from any part of the human figure.

3. Formation of new words on the ground of analogy. Example—from beneficence, maleficence; from beneficial, maleficial.

4. By composition. The composite mode in which enrichment is performed, is *per inequalitatem*, the words conjoined being in their import of unequal importance with relation to each other, the one may be considered as the principal, the other as being, with relation to it, the accessory word.

In this case, let the number of words thus related and entering into the composition of the compound word be supposed to be no more than two, the place of the accessory word will either be anterior or posterior to the principal; if anterior, it may be termed, with relation to it, a *prefix*,—if posterior, it has been called, in Latin, a *suffix*.

Where the mode of enrichment is by composition, it may be distinguished into:

(1.) Composition by simple aggregation, or agglutination, or coalition, viz. without change in the signification of either of the two constituent elements, and without the need of supposing the addition of any other word as necessary to complete the sense.[1] Of this sort is that which has place between a subject in the grammatical form of a *substantive*, and the name of an epithet or adjunct in the grammatical form of an adjective, as in the case of the words vain-glory, fee-simple, plain-dealing.

(2.) By aggregation with ellipses. Examples, 1. Churchyard, *i. e.* yard of the church: words omitted by ellipses, *of* and *the*. 2. Foot-ball, ball for the foot to play with by kicking it. 3. Mother-country, country which was as it were a mother to the person or persons in question.

5. By importation of words from other languages, dead or living.

6. By addition to, not to say completion of, each set of conjugates. A noun, taken in its several cases and numbers; a verb, taken in its several moods, tenses, numbers, and persons. These aggregates may be considered as so many grammatical conjugates. By the term logical conjugate, may be designated the aggregate of these same aggregates,—the whole stock of the aggregates capable of being formed of those aggregates.

In the Greek and Latin Lexicon, or, say Dictionary, of Scapula, may be seen the several lists, of logical conjugates made to grow out of the same root; say, out of some noun-substantive, taken in hand and considered as a root. Of the several branches, or, say ramifications, thus seen growing out of one and the same root, each one is expressive of an idea bearing a determinate relation to the idea designated by that same root.

Section XI.

Importation of Words from Foreign Languages, dead and living—its Advantages and Disadvantages.

There exists not that state in life, be it ever so humble, in which a man's wellbeing is not, in some shape or other, in some degree or other more or less dependent on the acquaintance he has with his own language,—of the language in which he not only converses but thinks. Language being not merely the instrument of discourse but, moreover, the instrument of thought, the stock of a man's ideas is limited and determined by the stock of the words which he finds at his command for giving expression to those ideas.

In every language, words are found in clusters growing out of the same root. Whatsoever be the cluster to which the word in question belongs, the comprehension a man has of its import is comparatively imperfect, if it include not a more or less general acquaintance with the whole cluster to which it belongs. In the stock of words of which the English language is composed, a very considerable, not to say the largest, portion, are borrowed from some one or other of several foreign languages; in some instances at a very early date, in others at different points of time from the remotest down to the most recent. In some instances these words so borrowed were transplanted in a single state, in others in large clusters, in others in smaller clusters, which, after transplantation, have gradually grown into larger ones.

When a word has thus been transplanted and naturalised in a single state, the conception entertained of its import by persons altogether unacquainted with the cluster to which it belonged in the language from which it was borrowed, is always very obscure and imperfect in comparison with that which he has of a word which forms one of a cluster, more or less complete, originally of the growth of his own language, or fully rooted and naturalised in it.

These langnages are some of them of a northern, some of them of a southern origin; of the northern, the one principally borrowed from is the German; of the southern, the French. Among ancient languages, those principally borrowed from are the Latin and Greek. The Latin being the language from which the French has borrowed a great part, perhaps the largest part, of its words; hence in the instance of many words of Latin origin, it remains a question whether the word was derived from the Latin immediately, or remotely, through the medium of the French. The Greek being the language of the writers from whom the first crude notions respecting most of the arts and sciences were derived to us; hence the appropriate terms, expressive of the subject-matters and operations belonging to those several branches of art and science, have in a

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large proportion been borrowed from that language. Even when the subject-matter, instrument, or operation, is itself new, a convenience is found, on several accounts, in taking its name from a foreign language, more especially from the Greek, rather than from our own.

For characterizing an object which not only is new, but is designed to be presented as such, a word as plainly new as the object itself is meant to be represented as being, is much more convenient than any old word taken from the old-established stock of words belonging to the language; for when any such old-established word is taken and thus employed, it comes with the whole of its original import adhering to it; and the consequence is that it presents to the mind instantly and to a certainty, a multitude of old ideas which on the new occasion it is not intended to present; and this in the most perfect manner, while it is only in a manner comparatively imperfect that it presents the new idea which it is intended to present.

Borrow the word from a foreign language, and that a dead one, from the Greek, for example, this confusion is avoided. Let but the reader have once succeeded in his endeavours to establish an adequately constant association between the new idea you mean to impress upon his mind, and the new-coined or imported word employed by you for expressing that idea, (for which purpose, in the first instance, an explanation, more or less particular, will, to persons unacquainted with the language so borrowed from, be always necessary,) thenceforward, as often as the new word is presented to his mind, the idea which it brings with it will be the very idea which it is your desire it should present; that and no other, that idea alone, unaccompanied by, and unclogged with, any other. By the very description of it thus given, this mode of proceeding, it is however evident, has its difficulties, and thereby its inconvenience.

The difficulty consists in getting men to give themselves the trouble of establishing this association; whereas, when the language from which the word is taken is a man's own language, the association, such as it is, is already formed; and howsoever clumsy the new appellative appears, and howsoever troublesome the cluster of collateral and (with reference to the purpose in question) irrelevant ideas it stands associated with, and however confused and inadequate the import is which it has the effect of presenting, still it can scarcely fail of bringing to view an import having some similarity to the one which it is intended to present; whereas, if it be a word of altogether foreign original, no other word of the cluster it belongs to being presented to the mind of the person in question, the necessary result is that, if the explanation attached to it has either never been received into the mind, or, after having been so received, has dropped out, the word is so much unmeaning sound, not presenting any the faintest intimation of the import which it is intended to present.

CHAPTER VI.

ANALYTICAL VIEW OF THE MATTER OF THOUGHT AND INTERNAL ACTION; CORRESPONDENT VIEW OF THE MATTER OF LANGUAGE.

SECTION I.

Thought the Basis of Language.

Of language, the primary and only original use is the communication of thought, the conveyance of thought from mind to mind, from the mind of a speaker to the mind of a hearer.

All thought belongs either to the intellectual or to the volitional department of the mind—to the *understanding* or the *will*.

A portion of the matter of language is frequently termed a discourse.*

By every portion of discourse, communication is endeavoured to be given of the state which, in some respect or other, one or the other of the above departments of the speaker's mind is in.

Acts of the intellectual department or faculty are, 1. Simple perceptions;† 2. *Sensations*, i. e. perceptions attended with pain or pleasure; and 3. Judgments or Opinions. Remembrance is but the work of a particular species of perception. Of the general faculty of sensation, a particular impression is the exercise or exemplification of the *memory*, the correspondent idea, *i. e.* the copy of that same impression as taken by and preserved in the mind.

Of judgment, the *subjects* are, 1. Points of similitude between object and object. 2. Points of dissimilitude between object and object. 3. Existence or non-existence of the relation of cause and effect as between object and object.

Simple perception is not capable of erring, no, nor sensation neither. But judgment is, on the part of every person, and on almost every occasion exposed to error.

A state or act of the mind in which judgment is continually included, is apt to be considered as an exemplification of perception alone, or sensation alone. Such is the case with all instances of the exercise of the organs of sight and hearing. I see a hill, *i. e.* what appears to me a hill; but oftentimes when what a man sees is believed by him to be a hill, it is in reality a cloud. I hear the rain, but oftentimes when a man thinks he hears the

* This word is necessary, for if instead of a discourse you were to say a language, the import expressed would be quite different from that which is here intended.

† For the distinction between impressions and ideas we are, it is believed, indebted to David Hume.

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rain falling, the cause of his perception is not rain, but the wind whistling through certain trees.

When as above, desire, (the state or act of the will,) and simple perception or sensation, (the state or act of the understanding,) are excepted, all that the mind of man is capable of containing is an act of the judicial faculty—an opinion, a judgment: an opinion entertained by himself, entertained in his own mind. This is the only immediate subject of any communication which, concerning the state of that faculty, can be made. Of no matter of fact, external to, of no matter other than that which passes in his own mind, can any immediate communication be made by language. Opinion, an opinion entertained by the speaker, this is all of which, in any instance, communication can be made. Of an opinion thus expressed, any imaginable matter of fact, real or supposed, may have been taken for the object. But that to which expression is given, that of which communication is made, is always the man's opinion, *i. e.* that which, in so far as the expression answers its intended purpose, that which he wishes should be taken for his opinion in relation to the subject in question, nor anything more.*

Be this as it may, the strictly logical consequences are the only ones that belong to the present purpose.

One is,—that, in every portion of discourse which is not the expression of a desire, a simple sensation, or a perception; in every portion of discourse, for example, by which the existence of a matter of fact exterior to the person of the speaker is asserted,—is included a communication made of the state of the judicial department of the speaker's mind, an opinion entertained in relation to that same matter of fact.

This being the case, a certain degree of complexity attaches to every proposition, the simplest imaginable not excepted, which has for its subject a matter of fact at large.

Eurybiades struck Themistocles. By a proposition in these words, what is it that I assert? It is this: *It is my opinion* that Eurybiades struck Themistocles. This is what I can be sure of, and it is all that, in relation to the supposed matter of fact, it is in my power to be assured of.

This pen exists,—meaning the pen employed in the tracing of these characters. This pen exists, *i. e.* my opinion is that this pen exists. Such is very decidedly and firmly my own opinion. But of no pen with which he ever wrote would any such opinion have been entertained by Bishop Berkeley.

Thus it is, that, in respect of this complexity—this constant and unavoidable complexity,—the expression of the mode of being of the intellectual department agrees with the expression of the volitional department of a speaker's mind.

Come hither. By this discourse, as every man will acknowledge, at the very first hint, what is expressed is, that it is my desire that the person to whom I speak should so do.

He is there. By this discourse, in like manner, what is expressed is, my opinion that *he* (the person spoken of) is in the place alluded to by the word *there.*

The consequence is, that in saying,—He is there,—the *proposition*, simple as it is in appearance, is, in its import, complex; and if it be considered as designating, expressing, communicating, the whole of the object of which it is employed as the sign, viz. the mode of *being* of my mind, it is *elliptical.* That to which it gives expression is the supposed matter of fact which (supposing me to speak truly) was the object of my thought;—that of which it does not contain the expression, is that *thought* itself; the only matter of fact of which the discourse in question is strictly and immediately the assertion, is left to be inferred from the context, from such words as are actually uttered.†

In all ordinary discourse propositions come entire, it is only on the occasion of some science or art, that, unless where employed instead of a proposition, and by ellipsis or abridgment, containing in it the import of an entire proposition, any term is presented by itself. Every man who speaks, speaks in propositions, the rudest savage, not less than the most polished orator,—terms taken by themselves are the work of abstraction, the produce of a refined analysis:—ages after ages must have elapsed before any such analysis was ever made.

Of the above observations, another logical consequence is this, viz. that for the giving expression and conveyance to any thought that ever was entertained, so far as concerns *import* and not *discourse*, nothing less than the *import* of an entire proposition, and that, as above, a complex one, ever was, or ever could be made to serve.

Not but that in many instances for the making communication of thought, even a single word is made to serve. But then it is by means of other words, which, according to the occasion, the single word in question may have the effect of suggesting as effectually as

* From this observation various practical inferences of the moral class may be seen to follow:

1. All reliance on the opinion as supposed of others, is in fact reliance upon a man's own opinion; viz. upon his opinion concerning the credit due to the opinion which in the instance in question is attributed to those others.

2. That in other words all bigotry is grounded in, includes in it self-conceit.

† It might thus be shown that these propositions which are given by the Aristotelians as simple and entirely expressed propositions, are complex and imperfectly expressed.

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by this same single word, the ideas constantly associated with it are suggested.

Looking at my son, whose name is John,—I say to him, John,—he hears me,—what is it that he understands by this? The import, the full import, belonging to one or other of these two phrases. My desire is that you *attend*, (viz. to what more I am about to say,) or, my desire is that you come, *i. e.* come near to the place at which I am sitting.

And thus it is by bringing to view other words, in the character of words of which, though not pronounced, the import was meant to be conveyed by the word which was pronounced, that a single word may be made to have the effect, and thus, as it were, comprise the import, of an indefinite number of other words,—of a discourse of an indefinite length.

This being the case, if nothing less than the import of an entire proposition be sufficient for the giving full expression to any the most simple thought, it follows that no word, being anything more than a fragment of a proposition, no word is of itself the complete sign of any thought.

It was in the form of entire propositions that when first uttered, discourse was uttered. Of these integers, words were but so many fragments, as afterwards *in written discourse* letters were of words. Words may be considered as the result of a sort of analysis,—a chemico-logical process, for which, till at a comparatively much later period than that which gave birth to propositions, the powers of the mind were not ripe.

With a view, however, to save the words which would be required to point out this complexity, such propositions as are only in *this way complex*, may, for some purposes, and on some occasions, be considered and spoken of as *simple*.

Upon this field of observation the logic of Aristotle and his followers did not penetrate. The subjects it began with were *terms*, *i. e.* words of a certain description, and beginning with the consideration of these terms, it went on to the consideration of propositions in the character of compounds capable of being composed out of these elements.

Antecedently to all particular inquiry, in an inquiry the subject of which was confined to the signs of thought—in an inquiry in which no attempt was made to look into the thoughts signified, in the conception entertained in relation to the nature of thought, and of the diversification of which it is susceptible, much clearness, correctness, or advance to completeness, could not naturally be expected.

These terms are accordingly spoken of as possessing of themselves an original and independent signification, as having existence before anything of the nature of a proposition came to be in existence;—as if finding these terms endowed, each of them, somehow or other, with a signification of its own, at a subsequent period some ingenious persons took them in hand, and formed them into propositions.*

But the truth is, that in the first place came propositions, and that out of these propositions, by abstraction and analysis, terms possessed, each of them, of an independent import, were framed.†

Condillac—for the purpose of elucidating Locke's doctrine that all ideas grow out of sensations, and but for such sensations could not have existence—imagined to himself the idea of a statue, and enduing it successively with the five senses, and such combination of them as promised to afford instruction with reference to this, his purpose, exhibited to view the furniture of the different orders of minds with which the statue would, in this way, be provided.

Proceeding thus, was proceeding in the way of synthesis:—synthesis means putting together. Proceeding thus, he took in hand, in the first place, as a basis for the rest, the most simple element he could find, and adding to this one, other elements one after another, exhibited, in this gradual way, the contents of all the several compounds capable of being made, and which, accordingly, are the most compounded of those in experience found to be made out of those elements.

Equally well adapted has this same method appeared to be for exhibiting to view, in the order of simplicity or complexity, (it may be denominated in either way,) the results that have been produced by putting together the several ideas respectively denoted by the several sorts of words of which language is composed.‡

Of language in its origin, the parts could not have existed in a degree of simplicity, equal

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* By the synthetic method, as syllables now form words, and letters form syllables.

† Brutes have no terms,—their language is all in propositions; their faculties enable them not to break them down into words.

‡ A warning which on this occasion and in this place it seems necessary to give, is, that the order which in the endeavour to give a clear, correct, and comprehensive view of the matter of language, considered in its most extensive portions and diversifications, those styled grammatical included, it has been deemed necessary to pursue, is not the same with, but very different from, the order in which in the progress of society they were developed.

By the distinctions pointed out by the different aggregates of words, termed by grammarians the parts of speech, the process of methodization has been applied to, and carried through the whole multitude of these numerous signs. But for the carrying on of the sort of mental process styled methodization, in which is included a high degree of abstraction, a comparatively mature state of the human intellect was requisite; and not only at the time of the first commencement, whenever that was, but long after that time, the stage occupied by the human intellect in the scale of maturity must, in comparison with that stage, have been extremely low.

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to that of the most simple of those at present in use. The first words must, in their import, have been equivalent to whole sentences, to sentences expressive, for example, of suffering, of enjoyment, of desire, of aversion.

Of this original language, the parts of speech called interjections are examples.

Of this nature is, and seems destined for ever to continue, the language of quadrupeds and other inferior animals.

To form the words of which language is at present composed has been the work of analysis. The original sentences were, as it were, broken down into words, these words into syllables, and these syllables, by the help of written and visible signs, into letters.

Of these elements, thus formed by analysis, those called words will now be to be put together in the way of synthesis.

The task here undertaken is to take up the several classes of words denominated by logicians, in consideration of the connexion between their respective imports with reference to one another, conjugates, and beginning with that one of which the import is most simple, not admitting of being analyzed into others more simple, to apply to it the several other classes of which the respective imports are more and more complex.

Of this theoretical labour, the practical use is this: by the observation of the compounds already made, and the conveniences with reference to the ends of language respectively derived from them, to show how the number of them may be made to receive increase, very considerable increase, and in respect of its several useful and desirable properties, the utility of the instrument called *language* may be made to receive increase.

Language has its logical and its chronological history: its logical history shows what must have been the order of formation among the elements of language—shows it from the nature of man, shows it from the circumstances in which all men are placed, shows it from circumstantial evidence. The chronological history of language shows what has actually been, &c.*

In language are to be considered, 1. The ideas designated; 2. The signs employed in the designation of those ideas.

As to the signs, they have been for the most part arbitrary, bearing no naturally characteristic analogy to the things respectively designated; when considered apart from the ideas, no very considerable instruction, comparatively speaking, is accordingly derived from the consideration of them.

Being arbitrary, they have accordingly been infinitely diversified; taking the human species in the aggregate, one and the same idea having found employment for signs to the number of some hundreds at least, not to say thousands, in the expression of it.

In a very different case are the ideas themselves. These being the furniture of the mind, and mind being, in fact, a property of the body—in the sort of fictitious language without which it cannot be spoken of—a sort of inmate of the body, the differences between minds, that is to say, the furniture of minds, are not greater than the differences between bodies.

Hence it is that, in the history of the formation of ideas, *i. e.* of the order in which the several ideas thus characterized by their several sets of signs have made their appearance, there must, throughout the whole human race, have been a considerable degree of sameness.

Section II.

Of Conjugates.

By grammarians, who may be considered as a tribe of logicians, operating in a particular quarter of the field of logic, the term *conjugates*, or, at any rate, the nearly allied terms, to conjugate, and conjugation, have been employed of old.

By logicians, to the import of these terms a considerable and very useful extension has been given.

By grammarians, the *aggregate*, or say *cluster* of connected words, called by them a *verb*, has been said to be conjugated when, in conjunction with the characteristic fundamental portion of it, the several modifications by which—the several varieties by which tense, mood, person, number, to which in some instances is preposterously added gender, *i. e.* sex stand expressed,—have been exhibited and recited; and the groups, in so far as for the expression of these modifications of the fundamental import, words more or less different in sound are employed, are said to belong to so many different conjugations.

With the same propriety and convenience as that with which the terms *conjugation* and *to conjugate* were applied to the cluster of intimately connected words called a *verb*, might they have been applied to the other cluster of intimately connected words called a *noun*, as diversified by the several modifications called *cases*, in addition to those by which the designation of the several varieties of which sex, person, (viz. with relation to the speaker, the hearer, and others,) and number are susceptible,—by which so many correspondent varieties, in respect of sex, person, and number, are expressed and brought to view.

As it happened, no such extension, however, was made. In the case of a noun, instead of *conjugation* and *to conjugate*, *declension* and *to decline*, were the words employed.

Applied to the cluster to which they were applied, viz. to the verb, the terms conjugation and to conjugate were apposite and expres-

* This last sentence of the paragraph seems to be a mere notandum, or the proposed commencement of a definition of the chronological history.—*Ed.*

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sive. *Jugum* is the Latin word for a *yoke*, an instrument by which a number of animals employed in draught are connected with each other and with the burthen which is to be drawn: connected with each other for that common purpose.

The cluster of words called a verb, presents to view a fundamental or radical import to which, throughout the whole cluster, expression is given by some letter, or combination of letters, which has place in every one of the component words, and by which, as by a bond of union, they are connected together, and made up into one *whole*.

Exactly of the same sort is the connexion, which, in the different parts or portions of the part of speech called a *noun*, has place.

In the instance of a *noun*, the several sources of modification, designated by the words *person*, *gender*, and *number*, are designated by the same names as in the instance of the verb.

The sources of diversification, in respect of which the noun differs from the verb, are, on the part of the *verb*, the *moods* and *tenses*, which the noun has not; on the part of the *noun*, the *cases* which the verb has not.

When, a noun being given, a man names the modifications called cases, together with those which regard person, number, and gender, he is not said to conjugate it,—he is said to decline it. Associated with the import of the word *case*, is, according to the grammarians, the import of the words declension, to decline.

But in the instance of *declension*, the emblem or archetypal image exhibits no marks of such felicity as have been seen exhibited in the case of *conjugation*. Case is from *cado* to fall; an image borrowed by the Latin grammarians from the Greek grammarians. A rod is conceived to fall. In the nominative case, the mode of its falling—the direction in which it falls is considered as direct—perpendicular to the horizon, and is accordingly called *rectus:* in the other cases, it is considered as *oblique*, viz. with reference to the horizon: accordingly, all these several cases are, besides their peculiar names, expressed by one common name, and called oblique cases.

With indisputable propriety, and with no inconsiderable utility, if comprehensiveness of perception be of any use, have the logicians extended the application of these words, conjugation and to conjugate,—or at any rate, that other term so intimately connected with them, viz. conjugate, or conjugates, not only to the cluster of connected words called nouns, but to all words, the connexion of which is formed and evidenced by the circumstance of their containing in their structure the main portion, expressive of the principal and characteristic idea of the whole cluster.

In the combination of letters expressive of this characteristic idea, may be seen what may be termed the root of the cluster. In the whole word, whatever it be, which, if there were any difference in respect of time, presents itself as likely to have been the word first in use, we have the radical and *primitive* conjugate; in all the others, the several ramified branches, or collateral and *derivative* conjugates.*

On looking over the materials of which any language is composed, two distinguishable classes of words will be found: one which possess a sort of independent import, and suggest each of them an idea without the assistance of any other word; the other, which not suggesting each of them an idea of itself, serves no other purpose than that of modifying in some way or other, the idea suggested by those of the above-mentioned independent cast.

The former may be distinguished by the name of *principal*, the other by that of accessory words.

Taken together a principal when considered in connexion with one of these accessory words, may be termed a conjugate.

With each such principal term will be found connected accessory words in great number and variety; hence, in the case of each principal, as many different conjugates as there are accessory words found in connexion with it; and as among these accessory words, different classes will be found distinguishable, hence to each such principal, so many clusters of conjugates.

In some instances, the accessory term is found attached to the principal, forming but one word with it, in others not, hence the distinction,—accessory words attached,—accessory words detached; conjugates in the attached form,—conjugates in the detached form.

Where the accessory word is attached, in some instances it precedes the principal word, in others it follows it. Hence the distinction,—accessories prefixed, or in the way of prefixion; accessories suffixed; or where the word accessory is understood to be in question, leaving out that word, one may say for shortness, *prefixes* and suffixes.

Accessories, which in one language are attached, are in another not attached.

Accessories, which in one part of the same language are attached, are, in another part of the same language, not attached.

In this respect, taken in the aggregate, infinite are the diversities which language brings to view.

The greater the number, which in any language can be found, of those sorts of words called conjugates, the more manageable will the language be, and the fitter for all the purposes of language.

For the formation of these, the first and

* Among those things which it is desirable should be done, is to class those conjugates logically. Among the uses that may be made of such classification, would be the improvement of language, by the completion of the several forms of conjugates.

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most obvious step will be, for a man to begin with the language in which he writes; *to take stock*, as they say in mercantile accounts, to form his inventory out of those articles which his own language furnishes, and then to see what, if any, enrichment it may be made to receive from other languages.

On this occasion, one subject of observation will be, the difference—the prodigious difference, between the degree, in which, in its present state, the language is stocked with this or that one sort of conjugate, and the degree in which it is stocked with this or that other sort of conjugate; in this or that one instance the number stretching to hundreds or even thousands, in this or that other, not going beyond units; when the same use, which is actually derived from the species of conjugate in those two or three instances, might, without inconvenience, be derived from it in the two or three hundred, or two or three thousand instances.

As a noun or a verb is a cluster of words, so a complete set of conjugates, formed upon the model of those already in use, and by analogy, each of them made complete, would include in it an aggregate cluster of all those clusters.

The different species of conjugates, in the logical sense of the word *conjugate*, are chiefly, if not exclusively, formed of either terminations or beginnings, (mostly terminations,) added to the principal part of the word, considered as standing in the relation of the root or basis; to that part of the word by which the principal part of the import of the compound is designated.

Take, for example, the cluster of conjugates, of which the Latin word *locus*, (the English, *place*,) forms the basis. Terminations or suffixes,—say, for example, locate, to locate, location, located, add locatedness and locatement. Beginnings or prefixes,—dislocate, add, upon the model of *replace*, relocate; add, upon the model of *transfer* and *transfuse*, translocate.

Of the import of all the several sorts of conjugates actually existing and imaginable, the basis is the import of the noun-substantive.

A noun-substantive is the name of some entity, real or fictitious.

By a real entity, understand a substance,—an object, the existence of which is made known to us by one or more of our five senses. A real entity is either a person or a thing, a substance rational, or a substance not rational.

By a fictitious entity, understand an object, the existence of which is feigned by the imagination,—feigned for the purpose of discourse, and which, when so formed, is spoken of as a real one.*

These sorts of fictitious entities may be classed in different ranks or orders, distinguished by their respective degrees of vicinity to the real one.

First comes motion,—fictitious entity of the first order. To speak of a motion, we are obliged to speak of it as if it were a substance. We say he or it is in motion; thus speaking, we speak of a motion as if it were a place, a portion of space, and the person or thing situated in that place.

The absence or negation of motion is rest; we say that person or thing is *at rest*:—speaking thus, we speak of rest as being a sort of substance; suppose a tree or a stone, and the person or the thing as being in a state of contiguity or relation to it.

Considered with reference to our senses, every particle of matter, perceived or perceptible at the *time* at which, or with reference to which it is considered, is either in a state of *motion* or in a state of *rest*.

The state of rest is the negation of the state of motion. With reference to the same object, no particle of matter can therefore be in motion and at rest at the same time. To say that it is or can be, would be a self-contradictory proposition, resolvable into a pair of mutually contradictory propositions.

But take any body composed of a number of particles of matter, then so it is that, of and in that same body, while part, *i. e.* some of those particles, are in a state of motion, other parts may at that time be in a state of rest.

When of any body it is said, that body has been in motion, what is meant is, that, at or in different portions of the field of time, that body has occupied different portions or positions in the field of space.

As atoms or minimum portions may be conceived as having place in the field of space, so may atoms or minimum portions in the field of time.

If speaking of any body, suppose the plaything called a peg-top. I say this body is now in motion; then, if by *now* I mean no more than a single atom or minimum portion of time, what I thus say cannot be exactly true, since, as above, for motion to have had place, or to have place, two atoms of time at the least are necessary.

But if, speaking as above, what I mean by *now* is a portion of the field of time, containing any number of atoms greater than one, then the proposition delivered by me in those same words may be true.

In general, the word *now*, when applied to motion, is understood as applicable with propriety. Why? Because, in the utterance of the proposition to that effect, atoms in great number are employed.†

* For a fuller explanation of this division of entities into real and fictitious, with the subdivisions, see the Tract on Ontology, supra, p. 195.

† In the above distinction in regard to *existence*, and thence *thought*, may be seen the necessary basis of the distinction of qualities into active and passive, and of verbs into transitive and intransitive.

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Here, then, we have a division of the states of which things, *i. e.* portions of matter, are susceptible, and that division an exhaustive one; of states of things, and thence and therefore of the objects of thought, in so far as they come within that same denomination, viz. portions of matter.

States of things, when at rest, are their positions with reference to one another in the field of space.

States of things, when in motion, are motions.

Considered abstractedly from volition, a *motion* is termed an event; a simple motion, a simple event; a complex motion, a complex event.

Considered as the result of volition, a motion is termed *an act, an action*, an operation.

In the word position, we see already the name of one fictitious entity, and thereby, in so far as it can be said to be visible, one fictitious entity. In the word *motion* we see another.

Taking into consideration any body which we have been considering as having been in a state of motion, we thence take occasion to ascribe to it a *quality*, viz. *mobility;* the quality which consists in the capacity of being, or aptitude to be, put *into*, and thence to be *in*, a state of motion. Antecedent to our idea of this quality, mobility must have been our idea of the correspondent *state*, viz. a *state* of motion.

To substance we ascribe qualities; to motion also we ascribe qualities. It is by this circumstance, that of motion, the import is placed, as it were, nearer to that of substance than that of qualities. Substances have their qualities,—they are large, small, long, short, thick, thin, and so forth; motions have their qualities,—they are quick, slow, rising, falling, continued, discontinued, regular, irregular, and so on.

If, then, *motion* be termed a fictitious entity of the *first* order, viz. that which is nearest to reality, mobility, and so any other quality, may with reference to it be termed a fictitious entity of the *second* order.

Here, then, we have an additional class of fictitious entities,—of fictitious substances. We have largeness, smallness, length, shortness, thickness, thinness; we have, moreover, quickness, slowness. We might have as well as rising, risingness; as well as falling, fallingness; as well as continued, continuedness; as well as discontinued, discontinuedness; we have as well as regular, regularity; as well as irregular, irregularity; attributes as well of substances as of motions.

Already has been brought to view, though as yet without special notice, a different sort of conjugate, the noun-adjective,—large, small, long, short, thick, thin, and so forth.

This sort of conjugate, in what consists its difference from that which is the name of a quality? In this:—when we speak of largeness, there is largeness; we speak of the fictitious substance so denominated, without reference made to any other object. On the contrary, when we say large, we present the idea of that same quality, but accompanied with the intimation of some other substance which is endued with that quality,—some other object in which that quality has existence, and is to be found. We put the mind upon the look-out for that other object, without which it is satisfied that the expression is incomplete; that the idea presented by it is but, as it were, the fragment of an idea,—a fragment, to the completion of which the idea of some object in which the quality is to be found is necessary.

In a word, the *substantival name* of a quality presents the idea, in the character of a complete idea, conceivable of itself, the *adjectival denomination* of that same quality presents the idea in the character of an incomplete idea, requiring for the completion of it the idea of some object in which it may be seen to *inhere*.

In the order of invention, proper names come before common names. Common names are the result of generalization; every common name is the name of a general idea.

The pronoun *I* is a sort of common name, being applicable by any person as well as any other; the pronouns he, she, and it, more manifestly so. Languages, it is said, are in existence, in which there are no such pronominal names. Instead of *I*, the speaker employs his own name; instead of you, the name of the person spoken to; instead of he or she, that of the person spoken of. A different sign for the third person, when of a different sex, must have been a superior refinement; so likewise the difference between animals endued with the organs of sex, and other substances,—whence the distinction between masculine and feminine, on the one hand, and neuter on the other.

Among the articles, the definite article *the* must have come first into use. The use of the indefinite article *a* implies the existence of the habit of abstraction,—of generalization,—an advance made in the art of logic.

On the occasion in which the original sole part of speech, the interjection, began to be resolved into the eight which we distinguish at present, the noun-substantive was probably the first to make its appearance, and that in the nominative case and singular number.

Nouns-adjective, and verbs,—which came forth first? the adjective or the verb, it seems not at present very easy to determine. What is certain, is, that of the adjective the idea is altogether simple in comparison with that of the verb; but as above, simplicity, so far from being an evidence of priority, is rather an evidence to the contrary.

When once the verb-substantive was established, the greatest of all strides was made in the track of abstraction and generalization. Added to a correspondent set of adjectives, this one verb is capable of performing the office of all other verbs.

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In the logical sense of the word conjugate every verb is a cluster or set of conjugates,—of conjugates bearing the same relation to each other. In the instance of every such aggregate, accordingly, to conjugate a verb, is, in the hitherto current language of grammarians, (for in this respect, in the language of logicians, there is a difference,)—to enumerate the several words which enter into the composition of the aggregate so denominated.

To see clearly into the nature of this aggregate, it will be necessary to take an inventory of the ideas, the signs of which enter into the composition of it.

Distinguish them, in the first place, into principal and accessory.*

Section III.

Irregular Nouns and Verbs are amongst those which are of most frequent use—why?

At an early period in the history of language, a word or sound of one sort was employed as a basis for one of the relations which are expressed by inflection, a word of another sort for another.

Fragments of the mass of language in the shape which it wore while in that imperfect state, are still to be seen, and that, it is believed, in every at present cultivated language.

These fragments may be seen in the composition of all those nouns and verbs which are regarded as being in any respect irregular, and which, on that account, are exhibited by grammarians in the character of irregular nouns and verbs.

By any person who will be at the trouble of reviewing them, these irregular parts of speech will, in every language, be found among those, for the import of which the demand is most frequent in its occurrence, and which, consequently, are in most general use. In the track of time the stage at which they first came into use, was that at which the number of words in use was not as yet sufficiently great for the labour attached to it, to have drawn men into the expedient of cultivating it by employing the principle and scheme of connexion for a multitude of mutually-related words, and thus substracting from the inconvenient multitude of different forms, with the import of which they would otherwise have had to make themselves acquainted. Such was the state of society,—such the state of the demand for discourse at the time when they first came into use. The demand never having diminished, thus it is that the actual use of them remains undiminished.

Thus it is that, of the history of language, no inconsiderable part remains to this day written upon the face of it.

* At this point the MSS. break off abruptly.—*Ed.*

Section IV.

Necessity of Names of Material Objects for the Designation of Pneumatic or Immaterial Objects.

All our psychological ideas are derived from physical ones,—all mental from corporeal ones. When spoken of, mental ideas are spoken of as if they were corporeal ones. In no other manner can they be spoken of. But thus to speak of them is to give an erroneous, a false account of them, an account that agrees not with their nature,—it is to misrepresent them. But very different from what it is in most other cases, in this case misrepresentation is not matter of blame. By it no deception is intended; if, to a certain degree, for want of sufficient explanation, misconception be the result of it, unless by accident, it is not among the results intended by him by whom the misrepresentation is made,—the false account is delivered. From what there is of falsehood not only is pure good the result, but it is the work of invincible necessity,—on no other terms can discourse be carried on.

Every noun-substantive is a name, a name either of an individual object, or of a sort or aggregate of objects. The name of an individual has, by all grammarians, been termed a *proper* name,—the name of a sort or aggregate of objects, a *common* name; it being applied in common to each one of the individual objects which are regarded as belonging to that sort—as possessing certain properties supposed to belong in commou to them all.

By this name an existence is ascribed to the individual object, or sort of object, of which it is the name. In the case where to the object thus spoken of, existence is actually an object of one of the five senses, and in particular of the sense of touch or feeling,—the only one without which man cannot exist, say, in a word, where the object is a tangible one; here there is no fiction,—as this man, this beast, this bird, this fish, this star;—or this sort of man, this sort of beast, this sort of bird, this sort of fish, this sort of star,—the object spoken of may be termed a real entity On the other hand, in the case in which the object is not a tangible one, the object, the existence of which is thus asserted, not being a real existing one, the object, if it must be termed an entity, as on pain of universal and perpetual non-intercourse between man and man, it must be,—it may, for distinction's sake, be termed a fictitious entity. Take, for example, this motion, this operation, this quality, this obligation, this right. Thus then we have two sorts of names, with two corresponding sorts of entities. Names of real entities,—names of fictitious entities.

Unfortunate it is, howsoever necessary and indispensable, that for speaking of fictitious entities, there is no other possible mode than that of speaking of them as if they were so many real entities. This blameless falsehood

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being universally uttered, and remaining universally uncontradicted, is, to a considerable extent, taken for truth. With every *name* employed, an entity stands associated in the minds of the hearers, as well as speakers, and that, entity, though in one half of the whole number of instances, no other than a fictitious one, is, in all of them, apt to be taken for a real one. To speak of an object by its name, its universally known name, is to ascribe existence to it,—out of this, error, misconception, obscurity, ambiguity, confusion, doubts, disagreement, angry passions, discord and hostility have, to no inconsiderable amount, had place. There is many a man who could not endure patiently to sit and hear contested the reality of those objects which he is in the habit of speaking of as being *his rights*. For the assertion of the existence of these fictitious objects, no small degree of merit has been ascribed, no small degree of praise has been given,—assertion has been taken for proof, and the stronger and more numerous the sets of words employed, the more complete and conclusive has that proof been esteemed.*

To such of the sources of perception as are of a material or corporeal nature, whether audible or visible, names are early attached;—by the presence of the object to both parties at once, the addresser and the addressee, *i. e.* party addressed, at the time that, by the addresser, the sign is presented to the sense of the addressee, the individuality of the object, the idea of which is, by that sign, presented to notice, is continually established. Bring hither that loaf;—behold that apple;—at the time when the sign is thus presented to sense, the thing signified,—the portion of matter thus denominated being at the same time presented to the senses of both parties, the import of the word loaf or apple is thus fixed, readily fixed, and beyond danger of mistake.

Objects of a corporeal nature may be designated and denominated in a direct way.

Not so in the case of an object of which the seat lies in the mind;—not so in the case of an immaterial being. For producing in any other mind any conception whatsoever of an object of this class, a man has absolutely but one means, and that is to speak of it as if it belonged to the other class,—to speak of it as if it were a material object,—to present to the party addressed some sign or other with the signification of which he is acquainted, in the character of a sign of some material object,—and upon the resemblance, or rather analogy, such as it is, which has place between the material object of which it was originally the sign, and the immaterial object of which it is now employed as a sign, to depend for the chance of the sign's exciting in his mind the idea which, on the occasion, it is endeavoured to excite, viz. the idea of the immaterial object.

In saying, bring me that loaf, it lies in that pan;—if a pan, with a loaf in it, were accordingly existing in the presence of us both,—I should raise up *in* your mind two ideas, that of a pan and that of a loaf. Correspondent to the portion of discourse having matter for its subject, here then is a portion of discourse having mind for its subject. By what means, then, is it, that by words employed for that purpose, I have succeeded in my endeavour to present to your own mind, the general, in conjunction with the particular, idea of something which I have caused to have place in it?

It is by causing you to consider your own mind under the image or similitude of a receptacle, in which the idea has been made to have place, *as* in the material pan the material loaf is deposited. And here, after having officiated in the *material* sense, the preposition *in*, a preposition significative of *place*, officiates in the *immaterial* sense; and it is by its material sense, that it receives its explanation when employed in its immaterial sense, for from no other source could it receive its explanation.

Applied to the designation of any class of material objects, a sign is, or may be, the sign of a *real entity*, applied to the purpose of designating any object of the class of immaterial objects, a sign cannot, in that respect, be the sign of anything but a fictitious entity. The entity of which the sign in question is given as a sign,—your mind, as in the above example, shall in the character of an immaterial substance, have whatsoever reality it may be your pleasure to see ascribed to it. But in the phrase in question, in virtue of the preposition *in*, it is in the character of a material substance that it is spoken of, a receptacle in which an idea may have place, as a loaf may in a pan; and in so far as *that* is the character in which it is spoken of, fiction is employed. So far, therefore, the name given to your mind is the name of a fictitious entity, and your mind itself a fictitious entity. If in the instance of your *mind* it be in any way displeasing to you to make this acknowledgment, take for the fictitious entity the idea spoken of as being lodged in it;—or if that be not agreeable, let it be your understanding, your will, your conception, your imagination, considered in the character of so many separated existences, capable of having objects lodged in them.

Of the origin of the import of the sign in some instances the materiality is, it is true, no longer visible. Take for example, as above, the word *mind* itself, and the word *will*. But in by far the greater number of instances, it is plain enough. Take for example the words understanding, conception, and imagination, as above. Even in regard to *mind*, though of that word the root, in material ideas, is lost; in the French word, the import of which, though it coincide not with it, comes nearest to it, viz. *esprit*, the materiality is plain enough.

* See a more minute exemplification in the author's criticism on the French Declaration of Rights, in vol. ii. p. 496, *et seq.*—*Ed.*

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Correspondent to, and derived from, that French word, or from the Latin word *spiritus*, is our word, *spirit*, and that spirit means originally breath, *i. e.* air discharged out of the lungs, is sufficiently notorious.

In so far as any origin at all can be found for it, it is in a material import that the origin of the import of every word possessing an immaterial import is to be found. Seeing that in the numerous instances in which both sorts of imports are attached to the same word, this rule is verified, we can do no otherwise than conclude that originally such was also the case in the instance of the comparatively small number of words, in and for which no *material* import can at present be found.

Throughout the whole field of language, parallel to the line of what may be termed the material language, and expressed by the same words, runs a line of what may be termed the immaterial language. Not that to every word that has a material import there belongs also an immaterial one; but that to every word that has an immaterial import there belongs, or at least did belong, a material one.

In a word, our ideas coming, all of them, from our senses, from what other source can the signs of them—from what other source can our language come?

Of one and the same thought, from mind to mind, by what means—through what channel can *conveyance* be made? To no other man's is the *mind* of any man immediately present. Matter, this or that portion of matter external to both, in this may be seen the only channel, the only medium, which the nature of the case admits of. Yonder stands a certain portion of matter. By that portion of matter feelings of a certain sort are produced in your mind: by that same portion of matter feelings of a sort, if not exactly the same, at least, with reference to the purpose in question, near enough to being the same, are produced, at the same time, in my mind. Here, then, is the channel of communication, and the only one. Of that channel language takes possession and employs it.

Under yon tree, in that hollow in the ground, lies an apple;—in that same spot, while I am saying this to you, pointing, at the same time, to the spot, you are observing that same apple. By this means, along with the signification of the words, *lies*, *ground*, *hollow*, &c., you and I learn the signification of the word *in*.

At and during the time we are thus conversing, the *ideas* of the *apple*, the *ground*, and the *hollow*, are *in* both our minds. In this way it is, that we learn the import of this same word *in* with reference to our two *minds*. In a word, with reference to *mind* in general, by no other means could we have learned it. In no other way could the word *in*, add, or *any other word*, have acquired a signification with reference to *mind*.

Unless it be the one expressed by the proposition *of*, taken as the sign of the possessive case, the material image, and thence the immaterial idea expressed by the preposition *in*, is the one the exemplification of which occurs with the greatest frequency.

By this example, the derivation of the immaterial idea from the material image, and the use thence made of the noun, considered as the name of the immaterial idea, from the use made of the same word in the character of the name of the material image, being once explained to any one to whom the explanation thus given is clear and satisfactory; of the two senses thus attached to as many propositions as the particular language, whatsoever it be, happens to furnish, the explanation may henceforward be despatched in a short formulary, and at the expense of a comparatively small number of words.

Section V.

Subjects of Discourse, immediate and ulterior.

Language is the sign of thought, an instrument for the communication of thought from one mind to another.

Language is the sign of thought, of the thought which is in the mind of him by whom the discourse is uttered.

It may be the sign of other things and other objects in infinite variety, but of this object it is always a sign, and it is only through this that it becomes the sign of any other object.

On this occasion, and for this purpose, the whole of the mind of man may be considered as distinguishable into two parts,—the purely passive and the active. In the passive is included the intellectual; the active may also be styled the concupiscible. The passive, the seat of perception, memory, and judgment, in so far as it is capable (as in *seeing*) of being exercised without any consciousness of the intervention of the *will*: the active the seat of desire, and thence of volition, and thence of external action.

The object for the designation of which a class of words, termed by grammarians a verb in the imperative mood, is employed, is one example out of several modifications, of the state of which the concupiscible part of the mind is susceptible.

A certain event presented by my imagination as being not yet realized, but as capable of being realized, becomes the object of my desire; if the event be regarded as capable of being brought into reality by my own agency alone, and my desire of seeing it realized, is strong enough, my will, my volitional faculty, and, at the same time, the appropriate branch of my externally active faculty are concerned in the production of it.

If it be regarded as capable of being brought into reality by the active agency of some other individual, and not otherwise, at the same time that it appears to me probable that, by the knowledge of the desire entertained in my

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mind a correspondent desire followed by corresponding action, will be produced in his, I address myself to him. I employ the faculty of language in making communication to him of such my desire accordingly.

In respect of power, regard being had to the particular occasion and purpose in question, what is his situation in life in relation and comparison to mine? Is it that, in my view of the matter, I have it in my power to exercise a greater influence on his wellbeing than he has on mine?—I am his superior. Is it that, on the one hand, the power which I have of exercising influence on his wellbeing, on the other hand, the power which he has of exercising influence on my wellbeing, are equal to one another?—He is my equal. Is it that the power which he has of exercising influence on my wellbeing is greater than that which I have of exercising influence on his wellbeing?—I am his inferior.

In the first case, if the mode in which I make communication of such my desire be such as to convey to him an intimation of the opinion I entertain of the position of such my own station in life with relation to his, the expression thus given to my desire is termed a command.

In Latin, *impero* means *I command;* imperation, commanding. Of the cluster of words, designated by grammarians by the name of a verb, one included cluster is termed as above, a verb in the *imperative* mood. By this name the intimation expressed is, that wherever a word of this form is employed, intimation of superiority is given, as above; that by it this sort of command is signified, and that commands are not signified by any other sort of word. But that neither of these propositions is correct will, in its place, be made manifest.

Thus far, then, are we advanced. The immediate subject of a communication made by language is always the state of the speaker's mind, the state of the *passive* or *receptive* part of it, or the state of the *active* or *concupiscible* part.

Now, then, in the case where it is the state of the receptive part, what is, or may be, the *ulterior* subject of the communication thus made?

Answer. It will be, in some respect or other, the state (viz. meaning the supposed or alleged state) either of the corporeal part of the speaker's frame or the state of some object other than, and exterior to, the speaker.

Of the corporeal part of the speaker's frame. Examples:—I am weary, I am hungry, I am dry.

Of the state of some object other than and exterior to the speaker. Examples:—That apple is ripe, apples are sweet, apples are good.

In both these cases, an object other than the state of my own mind is the subject of the discourse held by me, but in neither of them is it the immediate subject.

In both of them the immediate subject is no other than the state of my own mind,—an opinion entertained by me in relation to the ulterior object or subject.

In the one case it is an opinion of which the subject is the state of my own body.

In the other it is an opinion concerning the state of a body exterior to my own body.

In the first case, the opinion, though it be but an opinion, is not, as the case is here put, much in danger of being erroneous. In respect of the actual state of my sensations, meaning the sensations themselves, I am scarcely liable to be in an error. But beyond that point no sooner do I advance but a single step, if I undertake to pronounce an opinion relative to the cause of any of those sensations, from that moment I am liable to fall. I here launch into the ocean of art and science. I here commence physician; and, in the field of the physician the dominion of error is but too severely felt.

Speaking of the state of my own body, am I thus exposed to error?—Much more so am I in speaking of the state of any other.*

The sort of infirmity just noticed being common to all discourse, in the composition of which an assertion of the state of the speaker's mind intervenes, precedes, introduces, and weakens the ulterior assertion which lies beyond it, the consideration of the intervening assertion may, in every case but the present (in which, for the purpose of explanation, it has been necessary thus, for once, to bring it to view) be dropped, and the subject of the discourse may be stated as being, except in the particular case where it is the state of the speaker's body, the state of some exterior *entity* or assemblage of entities.

But now already comes the stage at which it will become necessary to launch into the track of fiction, at which, by an irresistible voice, and on pain of leaving everything unexplained and misconceived, the land of fiction calls upon us to visit it.

That apple is ripe. Apples are sweet. Apples are good. An apple is a real entity; in saying that apple exists,—the existence of which, I express my opinion, is a real entity. But *that apple is ripe;* of what is it that, in addition to that of the apple, I express my opinion of the existence? It is of the existence of the quality of ripeness in the apple.

But the quality of ripeness, is it a real entity? Different from apples, and everything else that is susceptible of it, has this quality, or any quality, any separate existence? If there were no other apple in the world than that which I have in my hand, this apple would not the less be possessed of existence; but if

* From these speculative observations practical inferences of no small importance might be deduced.

1. Avoid dogmativeness. 2. Still more avoid intolerance. In both cases never cease to bear in mind how slippery and hollow the ground on which your opinion, and consequently the utmost value of any expression which you can give to it, rests.

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there were nothing in the world that were susceptible of being ripe, where would be the quality of ripeness? Nowhere.

In saying this apple is ripe, what is it that I affirm? It is, that in this apple is the quality of ripeness. The two expressions are equivalent. But,—in this apple is the quality of ripeness, in the assertion thus made, what is the image that I bring to view? It is, that the apple is a receptacle; and that, in this receptacle, the quality of ripeness, the imaginary, the fictitious entity called a *quality* is lodged. For, of the preposition *in* this is the import. Witness the apple which I am supposing myself to have in my hand; witness the pen which, at this moment, I actually have in hand.

Thus it is that, in the use made of language, fiction, at the very first step that can be taken in the field of language, fiction, in the simplest, or almost the simplest case, in which language can be employed, becomes a necessary resource.

Coeval with the very first steps that can be taken in the endeavour to give a clear explanation of the nature of language, must be the intimation given of the distinction between real and fictitious entities, and the correspondent distinction between names of real and names of fictitious entities.

Though to the development, and thus to the explanation of the import of the word *ripe*, the word *ripeness* may thus be rendered subservient, it follows not that of the two the word ripeness was first in use. From the use which,—in and for the developing the texture of the import of the verb,—of the word quality, in the character of a generic name, and of the names of the several sorts of qualities distinguishable in the several sorts of substances in the character of so many specific names, may now be made, it follows not that words of this description were in use before the verb,—before that complex species of verb, in every individual of which the import of some species of quality may be found contained. On the contrary, the contrary course seems even by much the most natural and probable to have taken place.

In the earlier stages of society, all conceptions, and, consequently, all expressions, were generally indistinct; it is only by long-continued courses of attention that distinctness in conception and expression have been produced.

It seems probable that it was in the shape of entire propositions that the sounds of which audible language was composed, first presented themselves; witness those words which, under the name of *interjections*, are by grammarians numbered among the parts of speech, and which may be considered as so many fragments of language, as it showed itself in its earliest state.

As it was with the audible, so it appears to have been with the visible signs of language; and as words were formed by the decomposition of propositions, so were letters by the decomposition of words.

If all language be thus figurative, how then, (it may be asked,) how then is it that the character, and, in so important a class of instances the reproach, of figurativeness, is cast upon the use made of it in particular instances?

To this it may be answered,—The discourse that, in this particular sense, is *not* figurative, is the discourse in which, for the conveyance of the immaterial part of the stock of ideas conveyed, no other fictions,—no other figures are employed than what are absolutely necessary to, and which, consequently, are universally employed in, the conveyance of the import intended to be conveyed.

When a discourse is figurative, in lieu of those, or in addition to those, other images not necessary to, and thence not universally employed in the conveyance of the import in question, are employed.

In some instances, by the figures, by the images thus without necessity employed, it happens that, in the mind of the hearer or speaker, a sense of pleasure is produced: in this case, according to the nature of the subject, and according as the use of them is or is not conjoined with the use of *metre*, they constitute the matter of poetry or rhetoric, and are regarded as ornamental.

In other instances, the sensation of which they are productive, is that of disgust. The case in which this happens is where the resemblance between the material image employed as a sign, and the immaterial object meant to be signified, is too faint, the distance too wide, or where, in such a proportion as to be fatiguing for the designation of one and the same object, a multitude of images, one upon the back of another, are heaped up.

Not unfrequently when, for the designation of the immaterial idea meant to be designated, a man has chosen and employed a material image, not very closely analogous to it, that image brings to view and gives expression to a second, that second to a third, and so on, not one of them perhaps very closely analogous to the one by which it was immediately suggested. What adds to the confusion, a quality which belongs only to one of these images considered in the character of a subject, is inadvertently ascribed to another. In this way, perhaps, before the discourse is come to a close, the immaterial object, or state of things originally meant to be designated, has been forgotten, and is dropt out of sight; and thus the whole becomes a tissue of nonsense.

Of imperfection, in this shape, the most conspicuous examples may be found generally, not to say universally, in the works of oriental writers.

Section VI.

Relation as between Archetype and Type, with their respective Synonyms and Modifications.

When any two psychical real entities, any

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two ideas, whether perceptions, remembrances, or factitious mental images, have, either at the same instant, or at two contiguous, or nearly contiguous, instants, been present to the mind, —each of them, such is the effect of this conjunction, howsoever transient, acquires, in the event of its reappearance, a tendency to draw forth and introduce the other; and the more frequently the conjunct appearance is repeated, the more apt, *cæteris paribus*, is this tendency, or probability, to ripen into actuality.

This tendency is equal and mutual; and, forasmuch as when considered in this most simple point of view, the two objects thus associated present not any points of difference by which either can be distinguished from the other, they are not, while considered in this point of view and no other, susceptible of different names.

When, in respect of order of time, any difference between the two has place, in this difference may be found (it might be supposed) matter sufficient to serve as the ground for the formation of a difference in respect of name. But innumerable are the instances in which no difference in point of *time* can be found to have place; and even when a difference of this sort might, perhaps, be observable, to such a degree is it fugitive and questionable, as to be altogether incapable of affording any permanent and sufficient practical ground for a permanent difference in respect of name.

At the same time, so it is, that for the two ideas in a pair of ideas thus associated, two different names, and those employed throughout a large portion of the field of thought, have been provided.

To the possibility of putting to any kind of use this difference in respect of name, some difference in respect of nature was an indispensable requisite. Of this necessary difference, a source was found in the order of *importance*. For designating the object regarded as superior in the scale of importance, the word archetype, or thing signified, was employed; for the other, the words *sign* and *type*.

In so far as any importance is considered as belonging to both, and if to both, in so far as any difference is considered as having place in their respective degrees of relative importance, that to which the highest degree is ascribed will be considered and spoken of as the archetype, or thing signified; that to which no more than an inferior degree of importance, or what is, perhaps, more common, no importance at all is regarded as belonging, will be spoken of as the type or sign.

If, while importance is considered as belonging to both, no difference of level is considered as having place between their respective situations in the scale of importance, either may be considered as possessing the character of archetype, or thing signified in relation to the other, which, in that case, will be considered as operating in the character of type,—performing the function of type or sign.

In so far as no degree of importance is regarded as belonging to either of them, no source of denomination can, in that case, be found for either of them,—neither of them presenting any pretension to the character of archetype, neither of them is capable of being designated by any such denomination as that of *type*.

The condition requisite to the establishment of this conjunction being so extremely simple, and such as in the nature of things, cannot but be of continually repeated occurrence, design, human design, cannot but have been necessary to the exemplification of it.

But if, even without design, *i. e.* an exertion of the will applying itself to that purpose, it be capable of taking place, much more is it with and by design.

Of the production of this effect by design, language, in all its various forms, is the most extensive exemplification,—within the field of its operation, almost all other exemplifications are included.

In the case of language taken in the aggregate, the aggregate, composed of ideas or other psychical entities, capable of being expressed by language, being considered as constituting the aggregate archetype or thing signified; the aggregate of the sounds employed for that purpose, constitute, with reference to it, the aggregate type or sign; this aggregate type or sign being considered as the archetype. the aggregate of the images which, under the name of *letters*, are employed for the designation of those sounds, constitutes with reference to the aggregate of those same sounds, the aggregate type or sign.

Symbol, index, indication, token, badge, the ideas attached respectively to these words, are so many modifications of the idea attached to the word sign.

Though in the nature of the case as above, no object of perception be incapable of being in the character of type or sign, made to serve for bringing to the mind's view any other, yet, by reason of their natural permanence, or capacity for permanence, the signs most naturally and frequently applied to this purpose are of the *visible class*.

So extensive, and considered in its totality, so adequate to the purpose of designation, is the collection of signs of which language is composed, that any other sign or lesser aggregate of signs, to which, on any occasion it happens, to be applied to any part of the same purpose, is considered in no other light than that of a substitute to that supremely useful instrument.

Symbol, token, badge,—in these words may be seen so many names of signs of a particular description, employed on some particular occasion, with or without advantage in the character of substitutes to that universally and constantly fit and useful instrument.

Of the above three words, *symbol* and *token* are not incapable of being employed for the designation of any class of objects, considered

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as employed in the character of *signs*. Of the word *badge*, the applicability seems confined to such signs as consist of visible images.

Section VII.

Of Propositions.

Every word* to be made intelligible, must be represented as part of some assertion or proposition.

Every sentence is either an assertion, or a combination of assertions.

To be subservient to any use or purpose, every assignable portion of language must, on each occasion, be enunciative or suggestive of at least some proposition. This proposition will consist of one word only, or of divers words,—will be either *monoepic* or *polyepic*; when it is polyepic, the proposition has several words for its component elements.

A proposition is either simple or composite. Every composite proposition is resolvable into a number of simple ones.

Every monoepic proposition has, for its equivalent, a polyepic one, of which it is the abridged expression. Examples of monoepic propositions are the several conjugates, (the infinitive mood excepted,) which are usually contained in what is called a *verb*,—one and the same verb.

A simple proposition is either, 1. physical; 2. psychological; or, 3. compounded of the two.

Every psychological proposition has, for its archetype, a physical proposition; physical are therefore the propositions, the mention of which requires to precede that of the other.

By every single physical proposition, the subject of it is stated either as being in a state of rest, or in a state of motion.

In every simple physical proposition, if complete, are contained a word designative of the subject of the proposition, a word designative of the predicate of the proposition,† and a word designative of the copula,‡ or bond of connexion between the two, a word by which the operation called *predication* is performed.

This copula is either affirmative or negative; by the copula, if affirmative, the subject is averred to be in some state for the description of which the predicate is employed.

The portion of language employed for giving expression to a proposition may be either—1, exactly adequate or commensurate; 2, superabundant; or, 3, deficient.

It is exactly adequate, or commensurate, when, for the designation of each member, one word, and no more, is employed.

It is deficient in so far as the name of any one of the members being omitted, the import belonging to it is left to be inferred, viz. from the context, *i. e.* from such parts of the whole discourse of which the signs are inserted.

It is redundant, or superabundant, in proportion as, in lieu of the designation of any one or more of the members, words more than one are employed.§

Propositions may be distinguished, in the first place, into purely real, purely verbal, semi-real, or ambiguous.

A purely real proposition is either intellectual, *i. e.* state of the intellect expressing, or volitional, *i. e.* state of the will expressing.

In propositions of the intellectual cast or kind, the name of the subject may be the name either of a real entity or of a fictitious entity; so also the name of the attribute or predicate may be either the name of a real or the name of a fictitious entity.

Every simple proposition comes,—or without violence, and in respect of unity and simplicity, with considerable use, may be made to come, under this description, viz. a mass of discourse by which the assertion conveyed is to this effect, viz. that *is* the subject of which the name is contained or implied in it, a *property*, or quality,‖ of which the name is contained or implied in it, has had, has, or will absolutely or eventually have, existence.

Every proposition predicates the existence, past, present, or future, (*i. e.* future certain, or future contingent,) of some *state of things*, which is either motional or quiescent. A motional state of things is an *event*.

To predicate, for instance, the existence of a *quality* in a subject, is to predicate the existence, viz. past, present, or future, certain or contingent of the *events* which are the manifestations of that quality.

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* Words are the signs of ideas. To render a word understood, is to point out the idea of which it is a sign. Combinations of words form assertions.

† The predicate is always the name,—may at least be considered in every case as the name of a quality.

‡ So called, in as much as it operates as a bond of connexion to such other parts of speech as it may happen to the other parts of the proposition to contain.

§ In this case the redundancy is but relative; relation being had to the least number necessary and sufficient for the formation of a proposition in any case, since in many instances for the giving expression to the import meant to be expressed, words in considerable numbers beyond those in question just mentioned, will, in many, and indeed most, instances commonly be necessary.

‖ A quality is a fictitious entity, *i. e.* every name of a quality is the name of a fictitious entity. The quality thus expressed, may be either momentary or permanent,—momentary, *i. e.* not meant to be represented as having existence in the subject in question for any portion of time, other than the individual portion which the other words are employed to designate; permanent, when the property is considered as habitually resident in the subject in question, no length of time being marked out as that beyond which, on the occasion in question, the quality is not considered as residing in that same subject.

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A proposition containing the name of a fictitious entity, predicates indirectly, (as if a real event were predicated of a real entity,) some event as if it were real, concerning the fictitious entity, at the same time the event being referred to an entity which is not real, cannot itself be real; and this is done by means of a distant and fanciful analogy which there is between the event *typified* and the real event made use of for typification.

Abstract entities can no otherwise be expressed than by fiction. Thus a billiard-ball is said to be *in* motion; or motion *in* a billiard-ball; or two billiard-balls *in* a situation.

Two objects, two billiard-balls considered in successive moments, have been either at different distances from one another or at the same distance: in the first case they are in motion, in the second case they are at rest.

Motion can no otherwise be defined than by diversity of distance: the portion of matter interposed between them being at one time of one length, at another time of another. Diversity of distances are judged of by a comparison which is simultaneous; one moment I can place no more than one piece of wood of an inch long between the two balls, the next moment I can place two such pieces.

Words cannot, in a direct manner, represent any other events than what are *quiescent*. Motion they cannot represent. It is with language in this respect as it is with painting.

In all propositions composed of or concerning fictitious and abstract entities, there are two events concerned, 1. The real event typified; 2. The fictitious event, which is the archetype.*

The proposition which announces the event typified may be termed the *plain* or *unfigurative* proposition, the other the *figurative* proposition.

A proposition is really significative, in so far as the import of the subject, and that of the attribute, not being precisely the same, the attribute is represented by the proposition as bearing this or that relation to the subject. Examples,—man is rational, apples are nourishing.

A proposition is no more than verbally significative, in so far as without relation had to the nature of the entity signified by the subject, this or that relation is represented as having place between their names. Examples: A wight is a man; a miser covets wealth; a rapier is a sword.

A proposition is both really and verbally significative in so far as by the names given to the subject, and the attribute, respectively, the nature of both or either of them, is meant to be brought to view. Example:—Wood anemonies are plants; sea anemonies are animals.

Of all propositions by which a minor genus is spoken of as being contained in a major genus, the import may be considered as being of this mixed kind.

* See sect. v., p. 330.

In propositions of which the subject is a fictitious entity, the subject and predicate, the verb and noun which use has conjoined must be kept conjoined. A new combination appears an impropriety, at least a novelty, as much almost as the use of a new term. You may say strain a point, or stretch a point; you cannot say extend a point, nor strain nor stretch a line or a buckle.†

A complex proposition is that which has at least two subjects, with a predicate and copula to each of them, two subjects, and as many predicates and copulas. The general effect of it is to bring to view two entities, each of them real or fictitious, accompanied with an intimation that by one of them a change is produced in the state or condition of the other.

Considered in this point of view, a complex proposition may be termed a *transition-expressing* proposition. Examples:—1. Eurybiades struck Themistocles. 2. Themistocles was stricken by Eurybiades.

In both these instances the result expressed is one and the same; but in the one instance the verb employed is in what is called the active voice; in the other, in the passive.

In both instances a change in the state of a certain entity is represented as produced, and a *motion* is presented in the character of a cause of that change.

But in the first instance, the entity brought to view is the entity in which the motion is represented as having had its commencement, the entity which is represented as having been first in motion, and with that same entity the motion so produced by it. In the other instance it is the entity in which the motion is represented as having had its termination. Themistocles was struck, viz. by Eurybiades.

This motion may be considered as the manifestation of a correspondent quality on the subject, viz. an active quality, an active quality which is represented as having, on the occasion in question, at the moment in question, been resident in one of the two subjects in question, viz. Eurybiades.

In the other instance, the being struck may be considered as the manifestation of a correspondent quality of the passive kind, which is represented as having been on that same occasion, at that same moment, resident in the other of the two subjects in question, viz. Themistocles.‡

† Strain a point seems to have taken rise when breeches were trussed and untrussed by points.

‡ Here may be seen the origin and explanation of two species of verb. The verb active and the verb passive, or (to speak in the language of the past and present race of grammarians, by whom an ample cluster of words are spoken of as if they were all together but one word, to which real aggregate and supposed, imaginary unit, they give the name of a verb, *i. e.* one verb) the active voice and the *passive* voice of the verb.

A verb active is a verb, *i. e.* an aggregate of words in and by which to the import of the copula or verb-

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Section VIII.

Of the Subject of a Proposition.

The name of the subject of a proposition is either singularly designative, or plurally designative: it is singularly designative when no more than one individual is meant to be designated; plurally when individuals more than one.

A singularly designative name is either determinately or indeterminately significative; determinately where the individual meant to be designated is distinguished from all others, as in the case of the proper name of a man, a field, a street, a lane, &c.; indefinite or indeterminate when the import of the pronoun adjective, *some* or *any* is considered as attached to it.

A plurally designative name is the name of an aggregate or number of individuals, considered as if collected together.

These individuals are either all determinate, all indeterminate, or some determinate, others indeterminate.

1. All determinate, for instance the members of one official *board* actually in existence.

2. All indeterminate, for instance the intended members of an official board, not in existence, but in contemplation to be established.

3. Some determinate, some indeterminate, of this sort, are the names of all *species* and *genera* of things; of aggregate objects which have, have had, or will have, a real existence; for in and by every such specific or generic name are designated, in the first place, all the individuals which are considered as being at the time in question endowed with the specific quality indicated by the name. In the next place, all that ever were. In the last place, all which ever will be, and by the supposition these last neither *have* nor ever have had existence.

A specific name partakes, therefore, at once, of the nature of the name of a real entity, and of a name of a fictitious entity. It is the name of a real entity considered as applied to any one of the individuals now or before now in existence, which were endowed with the specific property, or to the whole number of them, or to any part of the whole number of them put together. It is as yet the name of a fictitious entity, considered as applied to all or any one or more of those individuals, which, with that same specific character belonging to them, are considered as about to come into existence.

In this it differs from the name of a quality, for a quality is an object altogether fictitious, an object which, considered as distinct from the subject in which it is spoken of as *inhering*, neither has, nor has had, nor ever will have existence; for as often as it is spoken of as if it were *in* a body, *i. e.* a tangible substance, or in some other object which is spoken of as if it were a body, it is spoken of as if it were a substance, a tangible substance, which, by the supposition, it is not.

Section IX.

Of Predication.

In the character of a *subject*, an entity, real or fictitious, being brought to view, if by any phrase, intimation is given, that in that subject a certain *quality* thereby designated has place, *predication* is performed: the quality, in respect of its being so asserted to have place in the subject, is styled the predicate; and the sign by which the *assertion*, the act of assertion to the effect in question is expressed, is termed the *copula*.

In this explanation a proposition implied is, that predication may, in every case, be reduced to this: an attribution of a quality to a subject; to the entity which is the subject of the proposition of which the predicate in question is the predicate. The import of the word quality being already explained as not to be confined to the case in which the existence of it is considered as *permanent*.

Property, relation, place, time, manners, by the one word *quality* can the import of all these terms be with propriety said to be included? Answer—yes.

1. *Property.*—This may be considered as being perfectly synonymous to the word *quality*, and therefore in any case in which the use of the word quality might on any account be less convenient, may without any difference of import, be employed as a substitute for it.

2. *Relation.* For explaining the import of divers parts of speech, this word will, of necessity, come to be employed. But the bearing this or that relation to this or that other object may, without impropriety, be numbered among the qualities or properties of any object.

3. Of the modification of which *place*, i. e. *space*, considered in a relative point of view, is susceptible, frequent occasion for making mention will present itself. But the having its existence *in* the *place* in question may, for so long as it continues, be, with as much propriety, in this instance as in any other, numbered among the *properties* or *qualities* of the object, whatsoever it may be.

4. So, in regard to *time*. Amongst the *qualities* attributed to this subject in question, may be the having its existence in a certain portion of the field of *time*.

---

substantive is added that of an active quality, as having been manifested by the subject in question. In this case the subject in question is the subject in which the motion is considered as having had its commencement.

A verb passive is a verb in which to the import of the same copula or verb-substantive, is added that of the correspondent passive quality, as having been manifested by the subject in question. In this case the subject in question is the subject in which the motion in question is considered as having received its termination.

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Every object that exists, exists in some portion or other of the field of place or space.

Every object that exists, exists in some portion or other of the field of time.

In so far as it exists in the field of *space*, an object bears a certain *relation* to every other object considered as having its existence in that field.

In so far as it exists in the field of *time*, an object bears, in like manner, a certain relation to every other object considered as having its existence in that same field—the field of time.

And thus we have the *relations* of *place* and *time*, which, with the addition of *quality*, in the less extended sense of the word, (viz. that in which it is put for qualities other than those which consist in existence in certain portions of the field of place and time) constitute some of the principal classes of the objects, for the designation of which the different classes of words called parts of speech are employed.

As it requires an entire proposition to give complete expression—expression at length, to an intimation, that, to the subject in question, a certain property or quality belongs, so does it to give the like expression to an intimation, that, of the subject in question, the existence is confined to a certain portion of the field of space, or to a certain portion of the field of time.

In this way it will appear, that not only, in an adverb such as—*here*, *there*, *now*, *then*, the import of an entire proposition is contained; but even that in a mere preposition such as *of*, *under*, the import of an entire proposition is contained; and that, accordingly, whenever, over and above the preposition *is*, the import of which is included in every *proposition*, (or every form of words by which a quality is asserted to be *in* a subject,) any other preposition is included in the proposition, that proposition is a complete one, containing, in addition to whatsoever other simple propositions it may contain, one of which the preposition in question is the abridged equivalent and substitute.

Predication is either real or verbal;—real, when the design of the proposition is to convey information concerning the nature of the object signified,—when it declares the existence of some quality, in the subject named;—of real predication, nothing can be the object or matter but a quality:* verbal, when the design is merely to give intimation of the import of the word which, on the occasion in question, is employed in the character of a sign, as an oak is a plant, a dog is an animal.

Different as they are in themselves, that is, in the design in pursuance of which they are employed, these two modes of predication are very liable to be confounded.

When the predication is *real*, the purpose of it, the purpose of the proposition in which it has place, is always as above, to convey an intimation that, in the entity in question which, or the name of which, is the *subject* of the proposition in question, a certain quality to which expression is given in and by the Predicate, has existence.

When the predication is *verbal*, purely verbal, the design is not to give intimation of any quality as having existence in any subject, but merely to convey an intimation of a certain relation between the import of one word and the import of another, no such object as the nature of the quality designated by either, being on that occasion meant to be brought into view.†

The reason for holding up to view this distinction is, that sometimes, when the effect or design of the preposition is of one sort, it is liable to be misconceived, by being conceived to be of the other sort.

Section X.

Of Collections of Signs, i. e. *Propositions expressive of some State of the Perceptive Faculty, considered as having for the Source of the Perception a corporeal Object or Objects.*

Correspondent to such as are the *objects* to be designated, such must be the *signs* by which they are designated.

Correspondent to the states, and such as are the modifications, of which corporeal objects are susceptible, such must be the modifications of the signs which, under the name of *language* or *discourse*, are employed in the designation of them.

Every proposition by which any portion of matter is brought to view—is presented to the mind, has for its subject either some material body, some portion of a body, or some collection of bodies, or portions of bodies.

The sign or portion of language by which any such modification or modifications of matter are presented to the mind, is termed a *name*, a *denomination*, an *appellation*, the appellative.

By any such name, what is designated is either a simple body, a part of a single body, or an aggregate of bodies, or of parts of single bodies.

If a part of a body be spoken of by itself, it is in so far considered as a whole.

If it be a single body, the mode in which that body is spoken of is either *determinate* or *indeterminate*; if determinate, the name is styled a *proper* name; if it be an aggregate of bodies, it is styled a *common* name.

If the individuals designated by such common name be all determinate, it is, or may be styled a collective name;—in so far as any of them are indeterminate, a general or specific name.

* A quality being but a fictitious entity, the predicate, if the predication be real, can never be anything but the name of a fictitious entity.

† See this distinction exemplified above, p. 334. —*Ed.*

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If, being a single body it be indeterminate, it has for its denomination a common name, whether *collective* or *generic*, being the name of the aggregate of which it is considered as an *unit*, coupled with a species of sign denominated a pronoun-adjective of which by and by.

During any given length of time every material object, capable of being taken for the *subject* of a *proposition*, in fact, has been either in motion or at rest. But when it is in motion it may be considered as capable of being at rest, and, when at rest, as capable of being in motion.

Every proposition has either one subject alone, or more than one; it being understood that under the description of one subject is here comprehended that which has for its sign a common name, whether collective or generic, (*i. e.* logically comprehensive,) or that of which a proper name is the appellative.

A proposition, if but one subject be designated in it, may be termed a single proposition; if two, double; if more than two, complex.

As everything which can happen to a corporeal subject is resolvable into this, viz. the having been, during the length of time in question, either in a state of motion or in a state of rest, so everything that can be said of, said to have happened to, that same corporeal subject, is resolvable either into this; viz. that during the length of time in question it has been, or has been capable of being in a state of *motion*; or into this, viz. that it has been, or has been capable of being in a state of *rest*.*

In either case, by what is said of the corporeal subject in question, a quality may be said to be ascribed to it, to be attributed to it, to be said to belong to it,—it may be said to be possessed of, endued, endowed with that same quality;—the quality is spoken of as being in that same subject, belonging to, appertaining to, inherent in that same subject.

If, in speaking of the quality as being in the subject, no more than a single point of time is brought to view, the quality thus attributed may be styled *actual*, or *momentary*, or transient;—if it be considered as either being, or capable of being, in the subject for an indeterminate length of time, the quality may be styled potential, habitual, or permanent.

When a quality is spoken of as appertaining to this or that subject, that which, on this occasion, is most frequently meant to be designated, and is, therefore, most apt to be brought to view, is an habitual or permanent quality.

In consideration of its being attributed to a subject, a quality is also frequently styled an *attribute*—an attribute of that same subject; and, in consideration of its belonging to a subject, it is also frequently styled a *property*—a property of, or belonging, or appertaining to, or inherent in, that same subject.

Suppose, then, a portion of the matter of language so constructed as to present to view a quality, whether actual or habitual, as appertaining to this or that given corporeal subject, let it be considered what are the objects of which this portion of the matter of language must have contained the signs.

These are, 1. The subject; 2. The quality. But to say that the quality in question is *in* the subject in question, is to affirm the existence of a certain relation between that subject and that quality, viz. the sort of relation of which the word *in* is the sign.

Thus, then, to the sign of the subject and the sign of the quality must be added the sign of the relation.

But what is thus said, what is thus affirmed, is, that in the subject in question the quality in question *is*; in other words, that *between* the subject and this quality there *exists* the relation in question.

Thus, then, to complete the texture of the proposition, to the sign of the subject, the sign of the *quality*, and the sign of the *relation*, must be added the sign of existence,—the sign by which existence is brought to view—the sign by which existence is asserted to have, or to have had place, viz. the existence of the relation between the subject and the attribute.

For the present, viz. to aid conception, and to afford a mark of distinction whereby this minimum proposition, and a proposition of larger dimensions and a greater number of parts, may be distinguished, let the following examples serve:—

Apples, say, are sweet, or, to keep clear of certain causes of complication, say, rather, sugar is sweet.

The number of words employed is here no more than *three*; but, in the form of expression, an abbreviation may be observed. Sweetness (the quality of sweetness) is in sugar. Sugar, the name of the subject—a corporeal subject: sweetness, the name of the quality; the quality consisting in the aptitude, in consequence of the necessary actions to produce in the *sensorium* of men the perception termed by the same name.

Section XI.

Aristotelian Logicians—Imperfection of their Conceptions in relation to Propositions.

For the formation of a proposition it has been seen that no fewer than four objects require to be brought to view,—objects all of them distinct, and, for the designation of each of them, a distinct sign capable of being, and in use to be employed.

What has, moreover, been seen is, that, for the formation of a complete proposition, though it be but a single proposition, the number of

* Sight, hearing, smell, present no exceptions. In case of sight, the object said to be seen, may be at rest, but the light, but for which it would not have been seen, has been in motion; and so in the instances of *hearing* and smell; in hearing, the air,—in smell, the odoriferous particles.

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objects brought to view cannot be smaller than as above.

True it is, that, for the bringing to view this number of distinct and altogether different objects, a smaller number of words, and, in truth, even a single word, may be, and often has been, made to serve and to suffice. But how? Only because, in virtue of certain established associations, by this one word, the whole number of the above-mentioned distinct and different objects have been brought to view.

Not so the Aristotelians. Constituent parts of a proposition, according to Aristotle himself, no more than two,* viz. the subject and the predicate: name of the subject a noun—name of the predicate a verb.

Seeing that out of the two, and no more than two, distinguishable parts no proposition could be formed, no attribute spoken of, as belonging to any subject, the followers of Aristotle one and all, added a third, viz. the sign of existence to which they gave the name of a copula, though in this, according to Sanderson, they departed from the truth of the case. Why? Because they departed from the conceptions expressed, from the language used, by Aristotle.

But the relation between the subject and the attribute, the relation of which the existence between this subject and the attribute was to be affirmed, even after the above addition, what name had they found for it?—what observation had they made of it? *Answer:* None.

As in *Anatomy* so in Logic, by a continued and varied course of attention bestowed by a succession of observers, new organs have, from time to time, been discovered.

For the formation of a proposition, taken too in its least dimensions, according to Aristotle, no more than *two*, according to his observers, no more than *three*, parts, necessary; whereas, this minimum number, it has been seen, is no less than *four*. And, in their view of the matter, this number sufficient for another sort of proposition, which remains to be brought to view, and which, when analyzed, will be found to contain twice the number of parts contained in the only sort of proposition as yet brought to view.†

Term, it must be acknowledged, is the Latin-sprung word corresponding to the word employed by Aristotle. *Terms*—no more than two; and so, by his followers, *terms* no more than *three*. But, by terms, he and they must have meant component or constituent parts; for that was the thing which required to be brought to view. If, by the name of term, there were any parts that were not designated, then, by some other name such other parts should have been brought to view.

According to Sanderson, the copula, says Aristotle, is neither a term nor so much as a part of a proposition;—it is no more than a syncategorema. And what, according to him, is a syncategorema? It is a part of the predicate which, according to him, is itself a part of a proposition, the subject being the other. A part of that which is a part of the whole, and yet not a part of the whole! What self-contradiction!—what confusion!—what trifling!—what torment to the student! who, by the law of authority, stands bound to find it all true and incomprehensible!

* Sanderson, lib. ii. cap. i. p. 55.

† Here, and at the commencement of p. 337, there are references to which no corresponding elucidations have been found. From these and other pretty obvious irregularities, it will easily be perceived that the author had left this portion of his MSS. in a fragmentary state.—*Ed.*

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FRAGMENTS

ON

UNIVERSAL GRAMMAR;

NOW FIRST PUBLISHED, FROM THE MANUSCRIPTS

OF

JEREMY BENTHAM.

*** With reference to the MSS. from which these Fragments are edited, see the Editorial Notices to the works on Logic and Language, pp. 214, 294.

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UNIVERSAL GRAMMAR.

INTRODUCTION.

You to whom, in comparison with the whole number of existing languages, but a very small number, at the utmost, of this whole can be, in any degree, known,—on what ground is it that you can undertake to give an account of Universal Grammar; that is, of the Grammar of all languages whatsoever?

Answer,—In a great degree, in respect of the character and mutual relations of the parts of speech—viz. of those classes of words of which language is everywhere composed,—the articles of which the subject of grammar is composed, as to which all languages cannot but agree: the demand, in that respect, being everywhere, to a certain degree, the same, the nature of the supply cannot fail also to be everywhere, in a great degree, the same.

When, in relation to these points of necessary and universal agreement, the connexion between the demand and the supply, between thought and the signs employed for the communication of thought, are brought to view, the points of possible difference will be found to lie within a compass comparatively narrow.

Under this identity of the demand, the greatest difference which, in regard to the texture of the supply, can possibly have place, will be found to be exemplified by a distinction which will here be brought to view,—viz. that between the *sparingly* and the *copiously inflected* languages,—and for the developing of this difference, the limited number of languages which, in the best informed parts of the world, are included within the ordinary compass of a liberal education, will be found to be amply sufficient.

Under these circumstances, whatsoever degree of diversity can have place, as between any language not included in the survey taken for this purpose, and those which have been included in it, such and so numerous will be found to be the points of necessary identity, as to form all together a ground or standard of comparison and reference, to which any language whatsoever, how numerous and various and widely distant soever its points of diversity with relation to the aggregate standard so formed may be referred; and, in this way, it is believed, such will be found to be the nature of the case, that, among those languages which have not, in any degree, been included in the survey taken for the present purpose, scarcely will any one be found to which the sketch here given,—supposing it applicable, with advantage, to those languages which have been included in the survey,—will not be found applicable with little, if any less, advantage, than even to the language in which this sketch is penned.

Absolute and *relative*—in the nature and properties of every object may these two branches be observed.

In the case of language in particular, to the absolute nature of each tongue or language belongs all those particulars, for the conception of which it is not necessary to keep in view any other tongue or language; to its relative nature, the points of agreement and disagreement, identity and diversity, similitude and dissimilitude, observable on comparison made of it with other languages.

For the attainment of the most clear, correct, and complete conception that can be attained of the points of similitude and dissimilitude, as between one language and another, there are no means so effectual as a view taken of the ends or purposes of language in general, with the addition of a view taken of the *different degrees of success* with which different courses are respectively taken by them towards the attainment of those ends.

The language in which, for the purpose of giving expression to the several modifications of import of which words are capable, no use whatever is made of inflection, in which, for the giving expression to all these several diversifications of import, no other instrument is employed than that of distinct addition, would not (it is believed) be found.

But some languages there are in which, on comparison with others, the use made of *inflection* is extremely small. These may be termed sparingly inflected languages; the others, copiously inflected languages.

Between *sparingness* and *copiousness*, taken according to the common acceptation of the terms, no naturally determinate line of separation would be to be found. But, in their application to language, to the several known languages, so wide and conspicuous, in every instance, will the difference be found, that, in the particular case here in question, no ambiguity will be found to be produced by that want of determinateness by which it might, in some cases, be produced.

From this distinction, between sparingly inflectedness and copiously inflectedness, as applied to language, a variety of results have been found deducible; most, if not all of them, such, that, in a practical point of view, the importance of them, if correct, will, it is believed, be generally and readily recognised.

In the character of propositions to be proved,

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they will now immediately be presented to view: what has presented itself as necessary in the shape of explanation and proof, will successively come to view as we advance.

In the field of universal grammar, four objects, or topics, present a principal claim to notice, viz:—

1. The uses or properties to which language has been, or is capable of being, rendered subservient.

2. The properties which, in the character of properties conducive to these purposes, are desirable on the part of a language; in a word, in the instance of every language.

3. The degrees in which, by the several known languages, in so far as they are known, these properties may be seen to be possessed.

4. The properties which, according to the occasion on which the language, whatsoever it be which is in question, is employed, are desirable on the part of the style, *i. e.* the language of an individual by whom, on that occasion it is employed.

I. The purposes to which language may be applied are 1, social, or principal; 2, solitary, or secondary.

II. The properties which, for all *purposes* taken together, are desirable on the part of language at large, *i. e.* as far as may be, in every language, will, it is believed, be found to be as follows:—1. Clearness, or perspicacity; 2. Correctness; 3. Copiousness, or comprehensiveness; 4. Completeness; 5. Non-redundance; 6. Conciseness, or compressedness; 7. Pronunciability, *i. e.* facility of pronunciation; 8. Melodiousness; 9. Discibility, *i. e.* facility of being learned; 10. Docibility; 11. Meliorability; 12. Ornability, *i. e.* facility of being made subservient to the purpose of ornament; 13. Impressiveness; 14. Dignity; 15. Patheticalness.*

Of the above-mentioned fifteen properties, the five first, regard being had to the difference in the degrees in which different languages are respectively susceptible of them, are, beyond comparison, the most important.

III. In respect of all these five properties, the sparingly inflected languages have, in a prodigious degree, the advantage over the copiously inflected languages.

By means of the sparingly inflected languages alone, and not by any of the copiously inflected languages, can the fundamental principle of universal grammar (and the nature of language in general) including the relation and correspondency between the nature of the thoughts requiring to be expressed and the nature of the signs capable of being employed for the expression of them, have been developed with that clearness of which they are susceptible.

To the class of copiously inflected languages, belong the ancient Greek, the ancient Latin, and the modern languages of the continent of Europe, of which, from those two, but most immediately from the Latin, the structure has been derived.

Of all known languages, the English is that which is most sparingly inflected.

Of all known languages, the English is accordingly that in which, in the highest degree, taken in the aggregate, the most important of the properties desirable in every language are to be found.

In particular, in a higher degree than any other, is the English language adapted for the purpose of a treatise on universal grammar, in which the essential characters of all language, and the fundamental principles of all grammar are intended to be brought to view.

In so inferior a degree are the copiously inflected languages, and, in particular, the Greek and Latin adapted to the purpose of being employed as instruments for the explanation of the principles of universal grammar, that it may be doubted whether, by any person unacquainted with any other than those languages respectively, a clear conception of the nature of language in general, and of the principles of universal grammar could have been conveyed or formed.

IV. By means of the lights afforded principally by this distinction between the sparingly inflected and the copiously inflected languages, and, in particular, by that enumeration by which it has been suggested, or, at least, accompanied, viz. the list of the properties desirable in language, observations may be suggested by which not only the attainment of the maximum of perfection in the style of each individual, on each occasion, may be facilitated, but the improvement of the whole body of the particular language which they respectively employ, may be placed in some degree within the reach of individuals.

For the purpose of conveying as early as possible a conception of the design and principal results of this essay, a distinction that has been observed, as between language and language, in relation to the parts of speech, must in this place be brought to view.

Essentially diversified, and *not essentially diversified*. Under one or other of these two heads will every one of them be found capable of being arranged.

Those which are essentially diversified, are those which are at the same time expressive of some one principal idea or import, and of some one or more accessory ideas, of which, according to the nature of the discourse, one or more are constantly and inseparably annexed to that principal one.

These will be seen to be, 1. The *noun-substantive*; 2. The *verb* called by grammarians the *verb-substantive*, the verb in its utmost degree of simplicity, the pure and simple verb, the sign of relative existence.

* See these treated at length in the immediately preceding Tract on Language, where several of the other matters casually noticed in this Introduction are enlarged on.—*Ed.*

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Necessarily attached to the principal idea, in the instance of the noun-*substantive*, there is but one accessory idea, and *that* is that of *number*. The objects meant to be brought to view by the word in question are meant to be represented either as one only, or as more than one, and in one of those two cases they cannot but be presented to view.

Necessarily attached to the principal idea in the instance of the verb, are the diversifications of which *time* is susceptible, and the ideas of absoluteness and conditionality, one or other of which is the inseparable accompaniment of every conception that can be formed on the subject of existence, considered as the attribute of the matter of fact, the idea of which is, by the portion of discourse in question, presented to the mind.

Considered with reference to time, as applied to the signs of existence in the case in question, the verb is said to present itself to view in different *tenses*.

Considered with reference to *absoluteness* and *conditionality*, it is said to present itself to view in different *moods*.

It will be shown presently how the imports of all the other parts of speech are resolvable into the import of these two, viz. the noun-substantive, and the verb-substantive, viz. as well those which in certain languages, though not of necessity, are in fact diversified, as those of which no diversifications are to be found in any language.

It will be seen presently how it is that the noun-adjective contains not any necessarily distinct diversification, its only diversifications being those of the noun-substantive, to which it makes reference.

It will also be seen how it is that, in addition to those just mentioned, the verb-substantive requires not any diversification.

It will moreover be seen that the import of any other verb than the verb-substantive admits not of any diversification other than those which belong to the verb-substantive, insomuch as the import of every verb, other than a verb-substantive, is resolvable into the import of the verb-substantive, added to the import of a noun-adjective.

And farther on will be explained the mode in which the import of the preposition, conjunction, and adverb, is resolvable into that of the noun-substantive, noun-adjective, and verb, one, two, or all of them.

For giving expression to the above-mentioned diversifications, the authors of language have had the choice of two modes. One is by the addition of so many separate words allotted to that purpose. The other is by some change in the letters of which the sign of the principal idea, or import, is composed. Say, in the first case, by detached signs, or, more strictly, though less clearly, by distinct addition. Say, in the other case, by modification, or, to employ the word already in common use, by inflection.

Of the ideas here hazarded, should they in any instance be deemed *new*, if they are at the same time regarded as correct and just, in that case, it is not from their novelty that any consideration can justly be deducible tending to forbid their being presented to view; in the idea of improvement, that of novelty is essentially an ingredient. Among such new ideas as have been ventured to be submitted to the public eye, the endeavour to render a thorough acquaintance with the whole nature and mechanism of language more general than it is, has never been lost sight of.

CHAPTER I.

DEFINITIONS.

Grammar is that branch of art and science in and by which the words of which language or discourse is composed are considered, without any regard to the subject or occasion of the discourse, but only with respect to the relations which the imports of the different classes of words of which it is composed bear to each other, these classes of words being the same whatsoever be the subject of discourse.

Those classes of words, into which all discourse, whatsoever may be the subject of it, may be divided, are termed *the parts of speech*.

In the course taken for the providing of words for the giving expression or designation to these several imports, considerable differences are exhibited by different languages. But as to those differences which have place in the mutually related imports themselves, the demand is the same in all languages.

That branch of the art and science of grammar which has for its subject the course taken by the particular language in question for satisfying this above-mentioned demand, may be called *particular grammar*.

In so far as the modifications taken cognizance of are those which have place in every particular language, this branch of the art and science may be designated by the name of *universal grammar*; its objects are the different correlative imports which are essential ingredients in discourse, whatsoever be the subject, and which stand respectively designated by the different classes of words, called as above, parts of speech.

In so far as the imports are considered in themselves alone, and without regard to the different provision made in and by different languages for the designation of them, they constitute the subject of a branch of the art and science of universal grammar, which may be distinguished by the appellation of the *abstract* or *unapplied* branch.

In so far as they are considered with regard to the differences that have place in the provision made for the designation of them in different languages, the branch may be termed the *concrete, practical*, or *applied branch*.

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CHAPTER II.

USES OF UNIVERSAL GRAMMAR.

Of an acquaintance with this branch of art and science, should it be asked what is the use, an answer is at hand.

1. Giving facility to the study of any particular language whatsoever.

2. Giving to study of a number of languages conjunctly, a degree of facility not obtainable by any other means.

3. In the case where a man is so circumstanced, that for the purpose in question it may be a matter of doubt with him which of several languages to employ,—affording substantial grounds for the solution of that doubt.

4. By developing the nature of the connexion between thoughts and their respective signs, between the different sorts of signs and the thoughts of which they are the signs, rendering a man the better acquainted with the nature of his own thoughts, whatsoever on any occasion may be the subject to which they apply themselves.

To give a clear, correct, comprehensive, and instructive view of the field of universal grammar, it is not enough for a man to look into the books that are extant on the subject of grammar, whether particular or universal,—he must look into his own mind.

For want of being confronted and compared with the purposes, the demand for which gave birth to the distinctions of which they are expressive,—for want of being brought to view in company with the thoughts or parts of thoughts of which they are the signs, the parts of speech have formed altogether a dark and mysterious cloud.

The only medium through which grammar, whether particular or universal, has ever yet been presented, is that in which it is presented by the languages of ancient Greece and Rome. But in both these langnages, properties will be shown by which they are rendered in a high degree incompetent, and ill adapted to their purpose.

If, then, by a clear insight,—if, in a word, by a clearer insight than has been as yet obtained of the general principles of language, and of that art and science of which it is the subject, the acquisition of any and of every particular language may be made to receive a facility hitherto unexampled,—if, at the same time, in the obtaining of this insight no greater difficulty will in the case of non-adults be experienced than in the forming that acquaintance which so many actually form, with the particulars of the grammars of several particular languages; if these several suppositions shall be found verified, it will follow that the art and science of universal grammar, will present such a claim to be admitted upon the list of branches of learning as will be proof against all dispute.

CHAPTER III.

OF THE PARTS OF SPEECH.

By the name of the parts of speech are designated certain classes of words which being either indispensably necessary, or universally and highly convenient to the purpose of discourse, are to be found in all known languages.

The characters by which these several classes of words stand distinguished, and from which they are denominated, are taken solely from the consideration of the parts which they respectively bear in the composition of the mass of discourse termed a grammatical sentence, and thence from the relation which the classes of objects respectively designated by them may be seen to bear to one another, when considered in that point of view. They are the same to whatsoever part of the field of thought and action the subject and adjuncts of the discourse belong.

Of these parts, the names in general use are,—noun-substantive, noun-adjective, verb, participle, adverb, preposition, conjunction, and interjection.

The objects respectively designated by these names are some of them *single*, some of them *aggregated*, consisting each of them of a cluster of words or signs.

The simple are, 1. Preposition. 2. Conjunction. 3. Adverb. 4. Interjection.

The aggregated are, 1. Noun-substantive. 2. Noun-adjective. 3. Verb. 4. Participle.

In those parts of speech which are aggregated, may be distinguished so many sub-parts as there are different objects included under the same name.

For giving an explanation of the several parts of speech and their respective *sub-parts*, that language will be the fittest to be employed which being furnished with signs for all the necessary parts and sub-parts, is encumbered with the smallest number of superfluous ones. This language will, it is believed, be found to be the English.

In giving an explanation of the several classes of words called parts of speech, the most instructive, not to say the only essentially instructive, course will, it is believed, be found to be the bringing to view, in the first place, the classes of objects that require to be designated, and thereafter, and thereupon, the different contrivances, and as the results of those contrivances, the species or classes of words which in different languages are employed in the designation of them.

This being the track proceeded in, for the laying a foundation for grammar, the art of logic, or, as some would say, *metaphysics*, is called in and employed.

The parts of speech are parts of a sentence, parts actual or potential, all of them of one and the same sentence.

To every word, to whatsoever part of speech it belongs, there are two distinguishable im-

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ports, viz. 1. Absolute. 2. Relative,—relation being had to the relative import of the other sorts of words, placed, or capable of being placed, in one and the same sentence.

The parts of speech may be divided into, 1. Significant by themselves. 2. Not significant by themselves.

Those significant by themselves are,—

1. Noun-substantive.
2. Noun-adjective.*
3. Verb unmodified.†
4. Adverb.‡
5. Interjection.

Those not significant by themselves are,—

6. Preposition.
7. Conjunction.
8. Words indicative of mood.
9. Words indicative of time.

The noun and the verb are each of them a cluster of conjugates,—each cluster composed of a root and branches.

The branches peculiar to a noun are the cases.

The branches peculiar to a verb are, 1. Moods. 2. Tenses. 3. Persons.

The branches common to nouns and verbs are numbers; *i. e.* affixes expressive of the number of the subjects or objects which are in view.

CHAPTER IV.

OF THE NOUN-SUBSTANTIVE.

SECTION I.

A Noun-Substantive—what?

The name of an entity, real or fictitious; real, as bodies of all sorts; fictitious, as motions, modifications of motions, qualities, modes or manners, powers, &c., is a *noun-substantive.*

In every language it exhibits itself in various forms,—some of them serving to give intimation of some relation of the nature of position or motion belonging to the entity; others, serving to represent sex as belonging or not belonging to it; others, to designate the number of those entities which are in question, but without any other distinction in regard to *number*, besides that between one and every greater number, or at most, as in the Greek, between one and two, and any greater number.

* *Good* is as intelligible by itself as *goodness.* Sole difference, *good* gives intimation of a subject in which the quality is about to be asserted to be inherent; whereas *goodness*, the substantive, does not.

† What is called the indicative mood, present tense, is the verb unmodified. In English take away the preposition *to*, it is a substantive. *To love*, take away the *to*, you have love, the substantive.

‡ This includes in it the signification of, 1. A preposition; 2. A substantive; 3. An adjective.

SECTION II.

Of Case.

An entity, be it what it may, is susceptible of a multitude of relations as towards other entities; when it is viewed in the character of the subject, or the predicate of a proposition, there is continual occasion for giving expression to those relations. In so far as for the giving expression to any such relation, a particular modification is given to the word by which the entity in question is designated, that word is thereby said to be put into a certain case.§

For the production of this effect two courses have been employed. One of them consists in the inserting into the texture of the proposition, a separate word appointed for that purpose. This may be termed the *external* course or method. The other consists in some change made in the letters, of which the word itself, of which the relation to be expressed is composed: this may be termed the internal method.

The external course seems the most natural. It seems to be that which would be the first to occur and to be employed. For giving expression to the principal subject, a separate term has been employed. By the same reason, and the same habit by which this mode of designation was suggested, in this instance, it seems but natural that this same mode of designation should be suggested in the other instance.

After having, for some time, been employed in company, though not in union with the sign of the subject, it was natural enough that insensibly the sign of the relation should come to be considered as an inseparable part of it, and then be put in union with it.

In the case of some of the most obvious relations, those which there is most frequent occasion to bring to view, this expedient might serve. But, as the field of language came to enlarge itself, the complication and embarrassment that would be produced by the giving such a multitude of modifications to the same word, were the expedient applied to every relation which there would be occasion to bring to view, set limits to the practice.

In the instance of some of these relations, the *internal* method, or course, continued thus to be employed. But, in the instance of other relations, the *external* method was preserved; and for every such relation that had been distinguished from the rest, a separate sign continued to be employed: being in the order in

§ The word *case*,—in Latin *casus*, a fall,—is a literal translation of the Greek πτωσις. From the Greek grammarians, Harris, in his Hermes, has given what may be called the *archetypation* of the word; *i. e.* he has brought to view the material image that has been employed for serving as a sign to the immaterial idea,—though the analogy be an extremely faint one.

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which the words of the sentence were arranged, most commonly put immediately before one of the two words employed as the names of the entities, between which the relation was represented as having place, it thus acquired the name of a *preposition*.

This course, could the effects of it have been generally foreseen, this union would never have been generally adopted. In the course of pronunciation, somehow or other it happened that the termination, which was regarded as suiting this or that principal word, was not found suitable to this or that other principal word. To one class of words, one set of terminations came thus to be attached; to another class of words, another set of terminations,—for the giving expression to one and the same idea, a great variety of signs. To these different sets of terminations were given the name of declensions.

From all these inconveniences, the English language is almost, if not altogether, free. For giving expression to these relations, with only one exception, it employs no other than the external mode. No declensions are to be found in it: from that source, that abundant source of useless and troublesome complication it stands wholly free.

Of the existence of one exception intimation has just been given. This exception is that which is constituted by the mode in which expression is given to the relation of possession: in the language of grammarians, to the *possessive*, or, as it was first styled, the *Genitive* case.* But of the sign employed for this purpose, such is the simplicity,—a single letter *'s*, —and that on all occasions the same, that, not being applied in the instance of more *cases* or *relations* than this one, the internal mode is not productive of any sensible inconvenience. Applying itself to all noun-substantives without distinction, no particle of that useless system of complication, expressed by the word declension, is produced by it.

The nominative case expresses the subject of the proposition, the minor terminus, the subject in which the motion commences.

The accusative signifies the subject in which the motion terminates; it may be called the *subject-expressing* case—"John, take the bread." Bread is in the subject-expressing case.

The vocative† is an elliptical expression; if it stand alone, it is equivalent to an entire proposition including a verb in the imperative mood,—*ex. gr., John!* i. *e.* John come here; i. *e.* John attend; my will is—the cause of my speaking is, a desire that John may come, may attend.

Neither of these cases signifies situation, which is relation.

The other oblique cases signify situation, either quiescent, or the result of motion.

They consequently require separate terms (i. *e.* prepositions) to express the relation where the relation is not indicated by the termination.

In English, the preposition indicative of the genitive case is *of*;—this may be called the possession-expressing case.

The dative may be called the goal-expressing case,—"Give this loaf to Mary." Mary is in the goal-expressing case: the case expressive of the *terminus ad quem*.

The ablative may be called the starting-post-expressing case,—"Take Thomas' loaf *from the* oven." The oven is, in the starting-post-expressing case, the case expressive of the *terminus a quo*, i. e. the thing, or event, from which it is desired, the motion desired shall commence.

Section III.

Of Gender.

Gender is the sign either of sex or the absence of it. Masculine and feminine of the two sexes: neuter of the absence of sex.

When the form given to a noun is that which causes it to be said to be of the masculine gender, an assertion which it expresses is, that the object of which the noun is the sign is of the male sex; and so, in the case of the feminine gender, of the female sex. When it is that which causes it to be said to be of the neuter gender, the assertion which it conveys is, that the object of which the noun is the sign is not of either sex.

Applied, as it is, to common names, this modification, wherever it is employed, is altogether an useless one, and not merely useless, but replete with absurdity and pregnant with inconvenience.

The English language is, in relation to this point, a perfect model. It attributes not, on this occasion, sex to any object that is not endowed with it. By the entire name, and not by any particular modification of the name, it attributes sex to such objects as are really endowed with that quality.

In the languages of classical antiquity, the Greek and the Latin, and in most modern languages that are chiefly derived from them, not to speak of others, in the form of the *conjugational* suffixes, and in that of the *pronominal adjuncts*, one or both, in speaking of the subject, be it what it may, a real or fictitious entity—if real, a thing or person,—intimation is given that it is of one or other, or neither, of the two sexes.

When true, the intimation thus given is su-

* In the singular number, besides the prepositional genitive, there is the inflectional formed as above by *'s*, but in the plural the inflectional is wanting. The use of the inflectional form is its subserviency to, 1. Conciseness; 2. Clearness (viz. by preventing entanglement and ambiguity); 3. Impressiveness (in some cases.)

† The vocative is expressed without a pronoun; O! may be added or not. Is it not a contraction for *hear?* In Latin from *audio?* In English either from the Latin, or from the French *oyer* which is from *audio?*

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perfluous, and it is useless when not true. Besides being superfluous and useless, it is a fertile source of confusion and indistinct and erroneous conception,—in every case a blemish and a nuisance.

Upon the conception and memory of the learner of the language it is a load, and that a very burthensome one.

Section IV.

Of Number.

A sign for the distinction of numbers,* *i. e.* of more than one from one alone, is, it has already been observed, indispensably necessary. In every instance, so that the purpose be but answered, the shorter the sign employed the better: and here so perpetually recurring is the demand for the distinction, brevity is of very particular importance. A single letter attached to the word by which the object is designated, when more than one of the sort is meant to be brought to view, is the shortest sign that can be employed. Shorter than a whole word employed on purpose, the instances excepted,—of which the number must necessarily be small, confined to the number of the vowels,—in which a word, consisting of no more letters than one, can, for such a purpose, be spared.

Here, then, is another point in respect of which the English language presents a model of perfection. To this purpose it allots a single letter; and, with the exception of a very few words, remains of the language in its earliest state,† this one letter serves for all words of this class,—on this head, as on the former, none of those declensions by which the Greek and the Latin are infested.

To the *noun-substantive* alone, and neither to the verb nor the noun-adjective, belongs, in the nature of the case, the affection or modification of *plurality*. It is only in the case of the substantive that the attaching to the word the sign of plurality can be of any use. Attached to the verb or even to the adjective, it is so much useless complication. *Abel is a good boy. Cain and Abel are good boys.* Here the adjective, when employed for giving expression to the plural number, or the state the adjective is in, differs not in any respect from the state it was in when employed for giving expression to the singular number. In Latin the adjective would, in the first case, be *bonus*, in the other case *boni*.

True, in the English, in the case where the persons meant are more than one, in the case of the verb, a word is employed different from that which is employed where one and no more is meant to be brought to view. But, even in English, some instances of superfluity in inflection may be found, and this is one of them. As by the noun-substantive alone the two numbers are sufficiently distinguished in other cases, so might they have been in this. For distinguishing the three classes of persons denoted by we, ye, and they, these pronouns serve of themselves, the verb being in the same letters in all three cases,—We love, ye love, they love. In the singular, indeed, the third person is in a different form;—not he love, but he loves. But, as *we* suffices to distinguish the first person from the third, in the plural, so might *I* have sufficed in the singular. Accordingly, in the subjunctive mood, which, in so far as it differs from the indicative, is an unnecessary one, *love* serves for the third person singular, and even for the second person singular, as well as for the first.

Every proposition in which the noun is in the plural number, is a complex one; and, as such, resolvable, at least in its origin, into a multitude of propositions, according to the number of the persons or things which occupy in it the station of subject or predicate, to which soever it be that that number is attributed.

When the number of these objects is determinate, the number of the simple propositions included in the complex one thus formed, will be exactly equal to the number of these objects, and so far *no abstraction will necessarily have had place.* When the number of these objects is altogether indeterminate, so, of consequence, must be the number of the simple propositions requisite to the constituting one equivalent to the supposed *plural* one.

Take the state of things when the primeval society consists of four persons, Cain and Abel being born to Adam and Eve. Applied to persons,—*They are asleep*, addressed by Eve to Adam, will have for its equivalent these two simple propositions, *Cain is asleep—Abel is asleep.* A sister, suppose, is born to them;—the numbers of simple propositions capable of being included in a pronoun-substantive of the first person, is now increased from two to three.

As soon as the plural becomes indefinite, *abstraction* is performed, the idea of a class is formed, an aggregate of which the individual elements are susceptible of continual change.

CHAPTER V.

OF THE ADJECTIVE.

An adjective is the name of a quality or re-

* The first step in the track of abstraction is the use of the plural number. The *singular* and *plural* numbers might be referred to the head of *cases*; considered as a species of *case* indicative of two species of numbers, into which two species, the whole aggregate of numbers actually and possibly exemplified, is by these two appellations divided in the *dichotomously exhaustive*, or say *exhaustively dichotomous mode.*

† Man, men; woman, women; child, children; brother, brethren; sisters not; the demand for the frequent mention of *sisters* coming later than that of the frequent mention of *brothers.*

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lation, accompanied with an intimation of the existence of a subject in which it is, to which it belongs, of which it is *a* or *the* property. *Celer puer*, a boy in whom is the quality of celerity.

The corresponding abstraction—denoting substantive, is the name of the quality unaccompanied by any such intimation of such substantive existence.

Though the name of the abstract fictitious entity, the quality, be prior in the order of tradition, to the adjective name, it was not probably in the order of existence. *Bonus* existed before *bonitas*—(as its brevity imports) *humanus* before *humanitas*.

Case, gender, number: of none of these *affections* of the noun-substantive has the noun-adjective any need. In all these particulars its import is determined, determined with perfect clearness by the connexion it has with the noun-substantive, by the connexion which the sign of a *quality* has with the sign of the *subject* in which it is meant to be represented as inhering.

In this particular, again, the English may be seen presenting a model of perfection. In the English the adjective is everywhere altogether undeclinable.

The substantive has but two *declensions*, two signs of modification,—the sign of the genitive case in the singular number, and the sign of the plural number in all cases. In the adjective even these modifications are unnecessary: accordingly, in the English, they have not either of them any place.

In the Latin and Greek languages the terminations of which the noun-adjective is susceptible, are determined by correspondency with the terminations which stand attached to the noun-substantive.

CHAPTER VI.

OF PRONOUNS.*

Pronouns are either substantive or adjective.

The pronoun-substantive, as the name imports, is but a noun-substantive of a particular kind.

The pronoun-adjective, as the name imports, is but a noun-adjective of a particular kind.

CHAPTER VII.

OF VERBS.

SECTION I.

A Verb—what?

A verb is the name of a quality exhibited as momentary, having place on the particular occasion in question, coupled with intimations of the dependency or independency of its existence, and of the several modifications of time in which its existence is represented as being placed.

A verb is either simple or complex. There is but one simple verb, and that is the verb-substantive,—the word of which the function is to designate existence, as ascribed to any subject.

By the addition of a word, expressive of absence or negation, it is rendered significative of non-existence.

In comparison with this, every other verb may be termed complex. For, in the signification of it is involved the signification of some *adjective*, in which, as above-mentioned, is already involved the import of some quality, coupled with the existence of some entity in the character of a subject in which that quality is to be found.

A verb, whether simple or complex, may be considered either with or without the several *modifications* of which it is susceptible—in a modified or in an unmodified state.

These modifications are either absolute or relative: 1. Absolute modifications are present, past, or future, with reference to an indeterminate point of time; 2. Relative modifications being such with reference respectively to some determinate point of time considered as present, past, or future, coupled also with the intimation of the state of existence, either active or passive on the part of the subject, *i. e.* the entity, real or fictitious in which the quality exhibited by the verb is considered and represented as existing.

For the explanation of these modifications, let us, were it only in consideration of its simplicity, begin with the simple verb,—the verb substantive.

A verb is the sign of existence. The modifications essential to a verb are those which are essential to existence, considered in that limited point of view in which alone the human faculties enable us to consider it. Of these modifications there are two sources:—1. Difference in respect of time; and 2. The difference between absolute and conditional existence, say rather between the case in which existence, as applied to any subject, is regarded by the speaker as absolute, *i. e.* certain, and that in which it is regarded by him as conditional, *i. e.* as uncertain, depending upon this or that event or state of things, the existence of which is regarded as a condition to its existence.†

* The examination, so far as respects this head, (as likewise that of participle and preposition,) does not seem to have been followed out by the author, and the subjects are thus briefly filled in from mere jottings found among the MSS.—*Ed.*

† By the word uncertain, though according to our forms of speech, spoken of as a quality belonging to the event or state of things which is the object or subject of consideration, no really existing object corresponds other than the state of the mind by which that event or state of things is contemplated. Take any conceivable state of things at pleasure,—either it exists or it does not exist, between its existence and non-existence there is no

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A verb is equally capable of existing, and being considered, in an unmodified as in a modified state.

1. As to those modifications of which *time* is the source.

No event or state of things can have existed but it must have existed in some portion or other of the field of time.

But in speaking of it as having existed, it is not necessary that of the portion of time in which it is regarded as having existed, any intimation shall be made.

2. Next, as to those modifications of which the difference between certainty and uncertainty, absoluteness and conditionality is the source. By the speaker in question, of the event or state of things in question, though in itself either existent or non-existent, the existence may have been regarded as certain, or it may have been regarded as conditional. But it is not necessary that of the point of view in which in this respect it has been contemplated by him, any intimation shall, in his discourse, have been conveyed.

Section II.

Of Person.

By persons, understand the several words or parts of words which are employed in making known, of which of those human beings, namely, a person speaking, (styled the first person;) a person spoken to, (styled the second person;) or a person spoken of, (styled a third person;)—what is said, is designed to be understood.

In the language of grammarians, persons are words representative of human beings bearing the above relations.

In English, these relations are expressed by pronoun-substantives without inflection.

Section III.

Of Number.

The relation of number is expressed in English by pronouns, without inflection, except in the second person singular, to which the plural is almost always substituted.*

The plural number supposes abstraction made, it implies the existence of a certain class. *Thou* and *he* do not compose a class; *we* not necessarily, where the persons are certain, yet it frequently does; *we* means *I* the speaker and some class *I* belongs to; *you*, *ye*, the person spoken to and some class of persons *you* belongs to.

Section IV.

Of Tenses or Designations of Time.

By the denomination of tenses are designated some words or parts of words which, when added to the word expressive of the principal, or say radical, idea, are designative of the ideas of so many distinguishable accessory modifications of relative time, in which the motion or state of things is meant to be spoken of as having place.

In the mind of every man, on every occasion, time naturally divides it self into three portions—the present, the past, and the future.† The designation of these three portions, respectively, is the only mode of designation that can be termed simple.

But whatsoever portion of time is now past, was at one time present, and at that time had its past and its future.

Moreover, whatsoever portion of time is now future,‡ will, should it ever have place, be present, and then like a portion of present time, it will have its past and also its future.

As time flows on, the absolute portions of time of which these names are designative, are continually upon the change—at every instant different from what they are at every other.

Of one of these portions of time, all language is essentially and necessarily designative, and that is the present, the portion of time that has place while the discourse is going on. Why necessarily?—*Answer*. Because a thing, and the only thing immediately and necessarily expressed by language is the state of mind that has place in the instance of him who is thus using it.

Past and future, manifestly and constantly, are words of reference, and even present may be such.

Hence, out of these three simple modes of designation arise seven compound ones,—making, in the whole, ten.

1. Simply present,—I am.
2. Simply past,—past without reference, I struck, I did strike.
3. Simply future.
4. Present, with reference to a portion of time past,—I was.
5. Present, with reference to a portion of time considered as future.
6. Past, with reference to present time,—I have been.
7. Past, with reference to a portion of time past,—I had been.
8. Past, with reference to a portion of time considered as future,—I shall have been.
9. Future, with reference to a portion of time past,—I was about to be; I have been about to be; I had been about to be.
10. Future, with reference to a portion of

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medium; suppose it to exist, all uncertainty is out of the question, suppose it not to exist, all uncertainty is equally out of the question.

* By this means, at the expense of an absurdity, simplicity is attained.

† *Present*, the subject of perception; *past*, of recollection; *future*, of expectation.

‡ All future time is essentially uncertain, conditional, for at no one instant do we know for certain that there will be anything in any other; that there will be another instant.

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time considered as future,—I shall be about to be.

But of whatsoever is considered as having place in these several portions of time respectively, the existence may be considered as absolute, or as conditional.

Adding to these absolute tenses so many conditional ones, we have thus twenty different designations applicable to so many differently considered portions of time.

Whatsoever be the species of action, and whatsoever be the portion of time, in which, by the representation given of it, it is placed, —if, in the nature of it, it was susceptible of continuance, and if, for the purpose for which it is brought to view, it be required that such its continuance be brought to view,—it is a matter of no small convenience when the structure of the language is such as admits of the bringing the fact of such continuance decidedly and distinctly to view.

Of the existence of this feature of convenience, the English language affords an exemplification; of its non-existence, the French.

I am now walking to Charing Cross; I was walking yesterday in the Park; I shall be walking to-morrow in the Park.

Many are the occasions in which the importance of an action depends on its continuance. If the structure of the language admit of it, the bringing to view this continuance is, on an occasion of this sort, frequently a great beauty, —the not being able to do so, a great defect.

The French language admits not of the giving, in this manner, continuance to any portion of time, nor, therefore, in a word, to any action.

In a translation made from that language into English, the advantage thus attached to the English is apt to be overlooked; and the word employed in the English being, in this respect, the literal translation of the French word, the poverty and unexpressiveness of the French language is thus transferred into the English.

This designation of *continuance* may be applied to, or withholden from, any one of the above-mentioned designations of time: to the before-mentioned twenty distinguishable designations of time, adding twenty others, we have thus forty for the grand total.

Under the particular structure of the English language the future tense, including its modifications as above, admits of an additional modification almost, if not altogether, peculiar to itself.

In consequence of this modification, it requires to be distinguished into two species,— 1. The simply predictive future; 2. The dominative future.

The simply predictive future is that which it has in common with other languages in general.

The dominative future is that which is peculiar, or almost peculiar to it, as above.

The future may be termed dominative, where the event predicted is spoken of as being the result of the power and will of him who speaks.

The dominative future may be termed *imperative*, when the event so predicted is spoken of as being an action about to be performed by a person, or persons, to whom the discourse is addressed.

In the absolute mode or form, for the giving expression to these two modifications of the future tense, the two words *will* and *shall* are employed with their respective conjugates; but, in the performance of this function, they make a mutual exchange of their significations in a manner which, to persons who are not perfectly familiarized to it by incessant use, is to a high degree perplexing.

For expressing an opinion affirming the absolute futurity of the event spoken of, we thus see that the English language has two auxiliary words, viz. will and shall.

1. In one thing, they both agree, viz. in that an event being, by other words in the sentence, brought to view, they both of them are expressive of an opinion on the part of the speaker that that event will take place; and that absolutely, no other event, or state of things, having place, on the existence of which, in the character of a condition, the event in question is dependent.

2. Another point in which they agree is, that, over and above the futurity of the event, as above, each of them, to the expression of an opinion to that effect, adds the expression of an opinion that, when it does take effect, it will have the will of the speaker for its cause.

The particular in which they differ is this: viz. the intimation thus given of the dependency of the event in question upon the will of him who speaks, does not, in the two cases, apply to the same persons.

When the purpose is, that this dependency should be considered as having place,—if the event in question be an act to be performed by the speaker, in which case the verb employed by him is in the first person, *will* is the futurity-denoting auxiliary verb to be employed, as I *will* read.

For this same purpose, if the event be either a mere event, or the act of a person or persons other than the speaker, the futurity-denoting verb employed must be the verb *shall*.

When employed in conjunction with the sign of the first person plural, viz. we, no such intimation is given.

Of the six descriptions of persons in conjunction with the signs of which this verb, as well as every other verb, is capable of being employed; viz. the first, second, and third person in the singular number, and the same in the plural number,* one there is, viz. that

* 1. The person, if but one, who is speaking.
2. The person, if but one, who is spoken to.
3. The person or thing, if but one, who is spoken of.

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indicated by the first person plural, concerning which it is not possible, in the nature of the case, that the strength of the assurance expressed should be equal in strength to the strength of the assurance expressed by the first person singular. Say, for example, we *will* read. For affirming my assurance of the futurity of the act, in so far as it is an act of my own that is in question, the first person—I will read—serves correctly and completely; but if, in conjunction with an act of my own, I apply the same sign of futurity to the respective acts of a set of persons with whom I consider myself as associated, it is impossible that, in relation to the description of the persons whose will in the result is represented, it should convey the same idea as that which it conveys when applied to the first person singular, viz. my own person alone. Let it be supposed that, in the instance of those other persons, I may, so far as concerns their acts, their external conduct, and that, at a future time, be as well assured as I can be of my own; still, in regard to the state of their will, —of their internal and secret inclinations, and that too at the very moment of uttering the discourse in question,—no such equal assurance is possible in the nature of the case. In this case, therefore, the import of the word is attended with a sort of ambiguity and indeterminateness with which it is not attended in any other of the six cases.

With respect to any set of persons whatsoever, an intimation which, by the use of one of these words it is in my power to express, is, that in so far as concerns the act which the principal verb is employed to designate, viz. the act of reading, their conduct is dependent upon my will; but, in this case, the class of persons in which, by my mode of speaking of them, I place them, must be that which, in grammatical language, is termed the third person plural, as above; that is, in other words, in speaking of them I must say, *They shall read.*

Here occurs another question. Supposing my design to be to represent the act, or other event in question, as depending upon their joint wills, for an import to this effect, by means of either of the two auxiliary verbs in question, shall and will, or by any other words, does the language afford any and what phrase? The answer is in the negative. By the phrase *they will read*, the import will not be conveyed. By that phrase an import that is not conveyed is, that their reading is regarded by me as dependent on my will; but neither is any such import conveyed by it, as that it will be dependent on the will of all of them together, or of any one of them. The event spoken of may, according to the description thus given of it, have alike for its cause either an act produced by a concurrent determination of their own respective wills, or a state of things in the production of which no part has been brought about by the will of any one of them.

The imports, for the expressing of which these two auxiliary futurity-denoting verbal particles afford the means, are simply two.

1. That the result which is meant to be represented, as about to have place, and for the designation of which the principal verb is employed, is meant to be represented as dependent upon the will of him who speaks.

2. That that same result is not meant to be represented as thus dependent.

In both these cases, to carry into effect the intention in question, viz. in so far as, in the nature of the case it is capable of being carried into effect, through all the six persons for the designation of which language in general has furnished expressions, both these auxiliary and futurity-denoting verbs are necessary.

But for the giving expression to these two opposite imports respectively, a course that will not serve is the course which, in general, is the only course which, for such purposes, can be made to serve; viz. the employing in one of the two cases throughout all six persons, one of these two words, and in the other case the other.

No; but for the giving expression to these two opposite meanings in the instance of each of them, both these words require to be employed, viz. as applied to some of the six descriptions of persons, the one of them; as applied to others of those same six descriptions of persons, the other.

For placing all this matter in what it is believed will be found a clear light, the following two scales of phrases, by one of which one of the two imports is meant to be expressed, —and by the other of them the other, will it is hoped, be found to serve.

Case I.—Case in which the event is meant to be represented by me (the speaker) as dependent upon my will, this may be called the imperative, or dominative, or tyrannically predictive future.

Singular Number.

First person,.....I *will* perish.
Second person,.....Thou *shalt* perish.
Third person,.....He, she, or it, *shall* perish.

Plural Number.

First person,.....We *will* perish.*
Second person,.....Ye *shall* perish.

4. The speaker, with the addition of the persons with whom he represents himself as associated.

5. The persons whom, in a number greater than one, he considers himself as speaking to.

6. The persons or the things, or the persons and things, which he considers himself as speaking of.

* In this person the assertion expressed is not capable of being so determinate in this number as in the singular.

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Third person,.....They * *shall* perish.

Here, in the singular number, the measure of power, of the existence of which intimation is given, is greater than in the plural it is possible to be. Be the power of him who speaks ever so great, there exists not any person of the state of whose will he can have an assurance altogether so perfect as that of the state of his own will.

In both numbers, when the *dominative* future is *imperative*, the measure of power expressed by it is greater; indeed, with strict propriety, it may be said to be infinitely greater, than that which is expressed by the formal modification styled hitherto, by grammarians, the imperative mood.

Employing the imperative mood, addressing myself to any person, and saying, *Speak thou*, or *Speak*, all that I give intimation of is, that it is my desire that he should speak. Employing the dominative and imperative future saying, *Thou shalt speak*, besides giving intimation of the existence of a desire on my part that he should speak, I moreover give intimation of a persuasion on my part that so irresistible is the influence exercised by my will on his, that the fulfilment of it is an event that cannot but take place. Such, beyond doubt, will be his conduct, and that conduct will have had for its cause, either on his part the knowledge of my will, or else my agency in some other mode.

Case II.—Case in which the event is not meant to be represented by me (the speaker) as dependent upon my will. This may be termed the simply predictive future.

Singular Number.

First person,.....I *shall* perish.
Second person,.....Thou *wilt* perish.
Third person,.....He, or she, or it, *will* perish.

Plural Number.

First person,.....We *shall* perish.
Second person,.....Ye *will* perish.
Third person,.....They *will* perish.

What remains is, employing successively through all six descriptions of persons, the same one of the two futurity-denoting words in question, to subjoin to it on the occasion of its application to those several descriptions of persons respectively, an intimation of that one of the two imports in question, of which it is expressive. In this case the explanation given is the same as that given in the others, the only difference is that which regards the order in which the particulars are brought to view.

* They, viz. those male persons,—those female persons, or those things, or one or all of those classes together.

Case I. *In which* will *is the word employed.*

Singular.

First person,.....I will perish. Intimation that the event in question is dependent on the will of the speaker, is, in this case, given.
Second person,.....Thou shalt perish.
Third person,.....He, she, or it, shall perish. In neither of these cases is any such intimation as that in question given.

Plural.

First person,.....We will perish. In this case a decided intimation is given, that, in so far as regards the fate or condition of the speaker, the event is dependent on his will. But in so far as regards the fate or condition of his alleged associates, the intimation given is, that it depends, in some way or other, upon their wills and his taken together; but as to what part their respective wills will respectively bear in the production of the event, no peremptory determination is expressed, because, in the nature of the case, no such peremptory assurance can be entertained.
Second person,.....Ye will perish.
Third person,.....They will perish. In neither of these cases is intimation of the dependency of the event on the will of the speaker conveyed.

Case II. *In which* shall *is the word employed.*

Singular.

1. First person,.....I shall perish. Intimation not given that the event is dependent on the will of the speaker.
2. Second person,.....Thou shalt perish.
3. Third person,.....He, she, or it, shall perish. Intimation given in these two cases that the event is dependent on the will of the speaker.

Plural.

4. First person,.....We shall perish. Intimation not given.
5. Second person,.....Ye shall perish. Intimation given.
6. Third person,.....They shall perish. Intimation given.

In a jest-book story, the mode in which a foreigner is apt to make a mistake in the application of these two words, is presented in a half-disastrous, half-ludicrous, point of view. The stranger has fallen into the water, and he cries out to the bystanders, "Help! help! I will be drowned! Nobody shall save me!"*

* *N. B.*—The person on whose will, by the simple use of the portions of the auxiliary verbs *shall* and *will*, as above, it is in the power of him who speaks or writes, to represent the event or state of things in question as being dependent, is

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Should and *would* appear, at first sight, as derived from and corresponding to *shall* and *will* respectively, and thence to one another. But this correspondence is far from being so perfect as at first sight might be expected.

1. Should has two perfectly distinct senses, viz. the conditional, and what may be termed the moral. 1. The conditional; as, if I should move, I should fall. 2. The moral, or monitory; as, You should take heed, lest you should fall. Here, in the first clause, the word *should* is moral, monitory,—importing that, in the opinion of the speaker, the performance of the act designated by the principal verb, is the object of moral duty or obligation, at any rate, of prudence, considered as choosing and employing means to the attainment of ends, good being included under that notion.

1. Preceptive in respect of probity, *i. e.* designative of what is conducive to general welfare; as—

In whatever you do for the furtherance of your own interest, you *should* never be disregardful of the effect it may have on the interest of others.

2. Moral, in respect of prudence, abstracted from the consideration of the end aimed at, consisting in the choice of means considered with reference to the probability they present of contributing to the attainment of the ends; as—

In whatever course you take for the furtherance of your own interest, you *should* never appear to be regardless of the effect it may have upon the interest of others.

So, in matters where morality is out of the question,—if you wish to hit a mark, you should be sure to take good aim.

Section V.

Of Proper Moods, or Moods properly so called.

The existence predicated may be either absolute or conditional,* *i. e.* certain or uncertain.

The mood employed in the giving expression to the absolute mode of predication is, by the Latin grammarians, termed the *indicative:* in this the action is stated as being real. The mood employed in giving expression to the conditional mode, is the *potential:* † in this the action is stated as being imaginary or fictitious, feigned for the purpose of discourse.

The absolute mood is the simple, the most natural, and most usually employed.

The conditional mood is expressed by adjuncts, some belonging to verbs, some being conjunctions.

The Greek subjunctive is either indicative or potential, *i. e.* absolute or conditional.

The following are the modes of conditionality, and the modifications applied to the import of may and can, by the addition of the negative *not*.

I. May.

I may strike, perhaps, if I will. May signifies liberty and power, but conpled with uncertainty as to the question whether it will be exerted or not. Present liberty-asserting, uncertainty-asserting.

As applied to an event not considered as subject to human will, to the will of any person in question, may signifies uncertainty in regard to the fact of its taking place.

II. Can.

I can, &c.—Present power-asserting,—perhaps, is here scarcely applicable.

III. Might.

I might (perhaps) strike.—Conditional liberty-asserting.

IV. Could.

I could (perhaps) strike.—Conditional power-asserting.

V. Would.

I would strike.—Conditional volition, or desire-asserting.

N.B.—Would, and more particularly *would not*, have also an absolute sense. *When Eurybiades struck, Themistocles would not strike;* i. e. he chose to abstain from striking.

VI. Ought to.

I ought to strike.—Moral obligation-asserting present or future, absolute or conditional.

VII. Must.

I must strike.—Present necessity-asserting.

VIII. Should.

I should strike.—Present necessity-asserting, with an obscure intimation of imperation. Low moral obligation-asserting.

IX. May not.

I may not strike. May here imports futurity, perhaps is here applicable.

X. Cannot.

I cannot strike. Can here imports present time, perhaps is not here applicable.

The use of the categorical or absolute senses must, in the order of invention, have come before and served as a basis of the conditional. The language of brutes is, throughout, absolute; conditionality embracing,—a prospect taken of the future through the medium of the past and present, is an object, to the surveying of which no eye inferior to the human is competent.

Section VI.

Of Improper Moods, or Moods improperly so called.

Absoluteness and Conditionality:—Under the name of *moods*, these are the two modes of designation actually established by ancient use for the designation of time. Of the forms that occur in language, these are the only two to which the term mood can with propriety be applied, not but that in itself, for any one thing, any one term is just as applicable as any other; but that, after its having been applied

only himself. He cannot, in this way, represent it as being dependent upon the will either of a person spoken *to*, or of a person spoken *of*.

* Absolute, Aristotelice, categorical; conditional, Aristotelice, hypothetical.

† Note here the mood termed subjunctive; in Greek, it has a different termination from that of the potential,—in Latin it has not.

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to this purpose, to apply it to others so widely different and separate from it; in *that* it is that the impropriety consists.

Of these improper moods, the usage of language affords two examples:—

One is, that which by the Latin and Greek grammarians is so improperly termed the *imperative*. The *optative*, a term applied by them in certain cases to another mood, would for this, it will be seen, have been the more proper adjunct, supposing the term *mood* properly applied.

The other is a form which may be termed the *causal* mood, in the Hebrew tongue, it is exemplified, and is denominated *Hithpahel*. In the Scottish dialect of the English language, though there is no denomination for it, it is exemplified in the phrase, he caused make. So also in French, *il fit faire*.

What by the Latinists is termed the imperative form, seems to be improperly put upon the same line with, and designated by the same name, as those other forms which, as above, are termed moods.

That which it expresses is, in all cases, the existence of a *will*, an act of *volition*, to a certain effect on the part of the speaker or writer. To the designation of this will the term *imperative*, considered as applied to all the modifications of which the expression of that will is susceptible, is in a remarkable degree defective; and, by reason of that deficiency, improper, improper in no fewer than three out of four cases.

Be the case what it may, such will, so expressed, will have for its object either some event, or some state of things. In speaking of this event, or state of things, either some person will be considered in the light of a person by whose will and consequent agency it will or would be made to take place or not; if not, the will expressed is of that sort which is called a wish, and the mood by which expression is given to it has been termed the *optative*.

In the other case, the person in consequence of whose agency it is supposed that the event, or state of things in question would be made to take place, is either the person to whom the discourse is addressed, or some other person; in this latter case, likewise, the mood comes under the same denomination, the optative.

When the person by whose agency it is supposed that the event, or state of things in question would be produced, is a person to whom the discourse is addressed, the relation borne to him, in the order of power, by him who speaks, may either be that of a *superior*, that of an *equal*, or that of an *inferior*. It is in that case alone in which the relation borne by him, as above, is that of a superior, nor in that, but when the superiority is so decided and acknowledged as to give to the expression of his wish, so denoted, the character and denomination of a command, that the term imperative can with propriety be applied to it.

It is when the person by whose agency it is desired that the event, or state of things in question should be produced is the Almighty, that the imperfection and absurdity of this denomination presents itself in a striking point of view. Grant us, O Lord! Hear us, O Lord! Taken in themselves, and without a thought bestowed upon the grammarians by whom a common appellation has been bestowed upon these forms, there is nothing to which any such idea as that of impropriety appears to attach itself. But when to such a form of speech, when to any form of speech, addressed to a person conceived to be in such a situation, any such appellation as that of *imperative* is applied, then it is that the impropriety—and that rising to a degree of absurdity, involving a virtual contradiction in terms, may be seen to manifest itself beyond dispute.

Such as it is, under the restrictions above brought to view, the form of speech brought to view under its trivial name, the imperative mood, may be termed the imperative mood.

All this while, there exists a form of speech which, though not termed *imperative*, is not only *imperative*, but more strongly and pointedly and forcibly imperative, than that which alone hath, as yet, been ever styled imperative. I speak of that which may be termed the *imperative future*, a form of speech which requires to be placed in contradistinction to that other, which may be termed the *predictive*, or simply the predictive future.

This is the form of speech which, in the English language, is in some cases designated by the word *shall*, as when a man says, *thou shalt*, or *you shall*.*

Go to school again to-morrow; you shall go to school again to-morrow. In and by these forms of speech, the mode of optation properly termed *imperation*, is plainly enough expressed; but neither is it less undeniably manifest that, by the latter, the form in which the command is expressed is much more forcible than in the former. Speaking to a child of mine, and using the first-mentioned of these forms, all that I give him to understand is, that, at the time in question, it is my will, my desire, that he should repair to the place in question. Of the expected efficacy of the will or desire thus notified, I say nothing; but if I say, to-morrow you shall go to school, that which I give intimation of is, not only that such is my will and desire, but that, in my own persuasion, such will be the effect of the notification made of such my will and desire, so strong, so irresistible, the force and influence of the command so notified, that upon, and in consequence of the notification so made of it, obedience, that obedience in and by which the wish and desire will have received its accomplishment, cannot but take place.

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* See *shall* and *will* considered at greater length above, p. 251. That portion of the MS. bears a date at a considerable interval from that of the present portion.—*Ed.*

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In English, the mood termed imperative, is expressed in the singular by the simple omission, or non-apposition, of the pro-nominal sign of personal relation. In the plural, the expressed pro-nominal sign is inserted, or not, according as on the occasion in question, it is or is not needed; when inserted, the pronoun is put after the verb, and thus the imperative is distinguished from the indicative.

The imperative mood, as being the expression of want and desire, is probably of very early invention. It is implied and involved in the use of the vocative case of the noun. Addressed to an individual, the name being a proper one, imports no abstraction, as a common name does, whether the article *a* or *the* be prefixed to it.

The subjunctive mood serves to mark the connexion given to the name of the action, with a proposition indicative of the time which is the object of reference in the indication of the time of it.

The infinitive mood is synonymous to that verbal noun which is the name of the correspondent action; and in Greek is accordingly declined with the article τὸ; the variation of termination being confined to the article. This is the ground-work of the whole verb.

Section VII.

Of Voice.

Voice has place in that case alone in which the verb being transitive, the proposition of which it forms a part is complex.*

Of the instances in which we have occasion to speak of *motion*,—in some the motion is with relation to our organs and means of observation, *boundless*, in others *bounded*.

The instance in which it is boundless is that of the celestial bodies, the planet on which we live, taken in its totality, included. In these instances, we learn not where the motion had its beginning, nor where, nor even whether anywhere, it will have an end.

But for the most part, in the instance in which we have occasion to speak of motion, the motion is bounded. Viewing it as it goes on, we either know, or have the means of learning, where it actually began, and of conjecturing, with more or less probability of success, where it will have an end.

Of the instances in which the motion in question has, or is considered as having, both a known beginning and a known end, in some its beginning and end are spoken of as having place in different bodies, in others, as having place in the same body. When it is considered as having place in different bodies, the verb which is employed in the designation of its commencement, according to the grammarians of antiquity, is said to be in the *active* voice. The verb which is employed in the designation of its termination, is said to be in the *passive* voice.

The verb at large, considered independently of the action of time, and conditionality and unconditionality, involves in its signification that of some quality, active, passive, or neutral, coupled, as in the case of the adjective, with the intimation of some subject in which it is to be found.

In so far as the quality indicated by the verb is an active quality, the verb is said to be a verb active, and to be in the active voice.

In so far as the quality indicated by the verb is passive, the verb is said to be a verb passive, and to be in the passive voice.

The passive voice has more of complication and refinement than the active. It involves the consideration and expression of causation; it brings to view an effect actually produced. It is, therefore, probably of later invention than the active.

Section VIII.

Of the Participle.†

The participle is an adjective. It agrees with most of the parts of the verb in so much, as to that signification which it has in common with the adjective, it superadds the designation of some portion of time.

CHAPTER VIII.‡

OF GOVERNMENT AND CONCORD.

With the ideas that belong properly to the subject—with the purely grammatical ideas—a ludicrous mixture of moral and political ideas has happened in this case to have been associated. In these latter times, Darwin has sung the loves of the plants; but ages before Darwin, Lilly and others had sung the loves, not altogether pure from the tyranny, of the parts of speech.

Here issues to view an additional mass of useless complication,—mere evil, unalloyed with any particle of good. Anarchy would everywhere be an advantageous substitute to such government,—discord, to such concord.

Of the herbage of this jungle, a suspicion arises that the seeds were sown by the muses.

Once more, in the structure of the English

* Of a proposition, whatsoever there is of complexity, is always in the predicate; the subject is always simple, excepting that complexity which consists in plurality,—when the subject is in the plural number.

When the verb is in the first person, being a neuter or non-active verb, the proposition may be a complex one, but if it be in the second or third person, the proposition is always a complex one.

† See note * to p. 348.

‡ The following, which is merely an initiatory fragment, is all that has been found in the MSS. in relation to this department, which, to judge from his memoranda, the author intended to discuss at considerable length.—*Ed.*

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language, scarcely a trace is to be found of the tissue of useless and unamusing fictions designated by those two names.

CHAPTER IX.

OF PREPOSITIONS, ADVERBS, AND CONJUNCTIONS.

SECTION I.

Their Connexion.

The three parts of speech here in question, viz. prepositions, adverbs, and conjunctions, require, in some respects, a conjoint consideration.

In many instances, the different functions designated by these three several names are performed by one and the same word.

Of the imports respectively belonging to them, that of the preposition is most simple. By the addition of some further import or imports belonging to some one or more other parts of speech, the import of the preposition becomes identical with that of the adverb; and in some instances at least, by the addition of a still ulterior body of import, the import once already augmented, as above, constitutes and becomes identical with that of the conjunction.

Of these three parts of speech, the explanation constitutes the obscure, the transcendental, the mysterious part of the art and science of universal grammar. In relation to the other parts of speech, the relation they bear (*i. e.* which their imports respectively bear) to the imports of the other parts of speech, viz. the substantive, the adjective, and the verb, resembles that which, by the signs employed in algebra, is borne towards the signs employed in common arithmetic. When the signs employed in algebraic arithmetic are all of them translated into the signs employed in common arithmetic, those employed in common arithmetic being, at the same time, reduced to one simple uninterrupted line of numeral figures, the import of the algebraic signs is completely understood, and the problem for the solution of which they have been employed is solved. In like manner, when of a sentence of which a preposition, an adverb, or a conjunction, makes a part, the equivalent is given in a sentence in which no part of speech other than a substantive, a verb, and an adjective, or some other substantive, is employed,—then, and then only, is the import respectively attached to these mysterious parts of speech at once clear, correct, and complete.

For bestowing upon the imports respectively attached to these several mysterious parts of speech, the above-mentioned desirable properties of clearness, correctness, and completeness, the following are the logical operations which have presented themselves as requisite to be performed in relation to them:—

1. Denomination; *i. e.* giving to them respectively, and to each separately, or to each aggregate composed of several together, an appropriate name or denomination.

2. Systematization; *i. e.* placing the several denominations, when so constructed, as above, in systematic order,—*i. e.* by a division made of the respective universal *trunks*, being the names of the several *genera generalissima*, preposition, adverb, conjunction, performed, in each instance, as far as it can be pursued with advantage, in the exhaustive or bifurcate mode, whereby their several relations of agreement and disagreement to and with each other will be brought under the eye at one view.

3. Exemplification,—*i. e.* exhibiting a proposition or sentence of the sort of those in common use, in the texture of which several words belonging respectively to the above-mentioned genera generalissima, shall respectively be employed.

4. Paraphrasis,—*i. e.* for the explanation or exposition of each such proposition, or sentence exhibiting another which shall present exactly the same import, but without containing in it a word belonging to the part of speech thus undertaken to be expounded.

As in every instance in the paraphrasis, or paraphrastical proposition, or sentence thus brought to view, a more or less considerable number of words will be contained, while the word thus requiring to be expounded is but one (except in a few instances in which two are so put together as to form, as it were, but one) on this consideration the paraphrasis may be termed the development.

SECTION II.

*Of Prepositions.**

This part of speech is employed to give intimation of the existence of some relation as having place between two or more entities, real or fictitious, determinate or indeterminate.

SECTION III.

Of Adverbs.

For giving expression to the import of the adverb, a single word is, in every instance, sufficient. Observing that the sign was thus simple, and looking no further than the sign, the ancient grammarians, and after them their worshipper, Hermes Harris, took for granted that the thought, that the import of which they found it the sign, was equally simple.

It is, however, a composite part of speech. In the import of the adverb, three distinguishable imports have been found contained,—being those of the three simply significant parts of speech above brought to view, viz. the substantive, the adjective, and the preposition. *Here*, i. e. in this place;—*Now*, i. e. at this time;—*Sweetly*, i. e. in a sweet manner.

* See note * to p. 348, supra.

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Of these elementary imports contained in a part of speech, the import of which is in this instance complex, the exhibition may be termed its development.

Upon the principal classes into which this part of speech may be distinguished, this operation will be endeavoured to be performed.

But in the first place it will be necessary to mark out these classes.*

Section IV.

Of Conjunctions.

By the same immaturity of mind, and want of penetration, by which the grammarians, Greek and Latin, and their above-mentioned worshipper were prevented from seeing into the import of the adverb, they were prevented still more naturally from penetrating into the import of the conjunction. In the days of those ancients the star of Locke had not risen. In the days of their idolater Harris, that star had risen, but his idolatry had shut his eyes against its light.

A conjunction is a word by which sentences are tied together. True,—but of the ligament thus employed what was the nature?—what the texture? Was it like the noun-substantive simple, expressive of one object or subject, and no more than one? or was it not rather complex? and if complex, what were the links or filaments of which it was composed?

Examining it with the eye of a grammarian, and among grammarians of an etymologist, Horne Tooke discovered that the conjunction was always some element of the complex aggregate part of speech, a verb. Capital indeed, and highly instructive was the discovery, but at that point it rested.

But of those small words consisting, several of them, each but of one syllable, what is the import? Is the import as simple as the word thus employed as the sign of it? To answer, or so much as to ask the question, may perhaps be regarded as belonging to the province rather of the logician than the grammarian, and into the field of Logic scarcely did Horne Tooke, ingenious as he was, ever attempt to introduce his sickle.

Of the adverb it has been seen that the import is complex, having a number of elementary imports, not fewer than three; but of the simplest species of conjunction the import of the adverb includes no more than a part.

Of conjunctions, in addition to that of adverbs, the development will now be attempted.†

But first in this case, as in that, it will be necessary to bestow upon them an arrangement.

The demand for this part of speech being the same in every language, so far as concerns import, this arrangement and this development will serve for every language.

CHAPTER X.

OF INTERJECTIONS.

Interjections have the import of entire propositions. They may be considered as fragments of the original language,—they are to the human animal what the different species of sounds emitted by other animals are to them respectively,—*ex. gr.* the mewing, the purring, the growling, the spitting of the cat.

Interjections may be termed the *unconstructural* parts of speech;—the others the constructural.

In the interjections may be seen so many remains of the original language common to man and the brute creation;—the language which was in use before the parts of speech were formed, by the decomposition and recomposition of propositions. Every interjection may be considered as the equivalent of some preposition, as, alas! *i.e.* I am grieved,—I experienced a sensation of mental pain. Hurra!—I rejoice, I experience a sensation of mental pleasure.

* This project does not appear to have been completed.—*Ed.*

† This project also appears not to have been completed.—*Ed.*

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NOTE BY THE EDITOR

ON

THE TRACTS ON POOR LAWS.

The following tracts which have all been previously printed, (though the last in order, is now for the first time *published*,) bear internal evidence that they are only a portion of what the author has written on the subject of the poor laws; he left behind him indeed a considerable number of unpublished MSS. on the subject, which on some future occasion may see the light. From the Annals of agriculture, it does not appear how far the queries there promulgated, from the answers to which the author intended to fill up the outline of his great work on pauper management, were responded to. In vol. xxix. of the Annals, (p. 556,) the Editor makes an earnest appeal to his readers on the subject, and expresses a hope that "the country gentlemen, and resident clergy, who can with so much ease satisfy many, if not all of his [Bentham's] inquiries, will take the small trouble of sending him the particulars he requests for the parish at least in which they reside;" but it is probable that few of the persons able to supply the requisite information comprehended his enlightened views, and he seems not to have met with sufficient encouragement to induce him even to complete his outline.

It has been the practice of the Editor, on the occasion of the state of the law as it existed when the author wrote being animadverted on in the text, to mention in a note any changes that may have since taken place by statutory or other authority. In the present instance, however, the vastness of the alterations which have been made in the administration of the poor law, and especially in relation to the features chiefly noticed in these tracts, rendered it impossible to accomplish this object without introducing more extensive notes, than readers, who have so many other means of being acquainted with the subject, would have felt of service. The chief administration is, in the plan proposed by Bentham, in hands quite distinct from those in which it has been placed by the poor law amendment act: but the two systems agree in the principle of centralization. In the minutiæ of the plan so far as they are indicated in the ensuing outline, the reader will find many arrangements identical with those, of which the practical experiments, on which the new poor law is based, have led to the adoption; while many of the practical abuses attacked by the author, such as the system of settlement, the facilities for obtaining relief without submitting to labour, &c., have been duly acknowledged and rectified. But perhaps the most remarkable illustrations of the author's practical sagacity, are to be found in his anticipations of the civilizing benefits of such alterations as he suggests; benefits which may have then appeared as the wildest Utopianism, but which have of late been on so large a scale, practically and speedily realized. A comparison of the effects which the author expects to arise from his plans of juvenile training and apprenticeship, may be viewed as a text, of which the report on the training of pauper children presented in the year 1841 to the secretary of state by the poor law commissioners, may be considered as forming a series of practical illustrations.

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TRACTS

ON

POOR LAWS

AND

PAUPER MANAGEMENT.

BY JEREMY BENTHAM.

NOW FOR THE FIRST TIME COLLECTED.

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1. Unavowed-Employment Hands —(*See* XVI.)

2. Lazy Hands—(*See* XVII.)

—(See

N'D

TIONS *continued.*

of the Pauper, and thence the nature of the em-
ch upon the question, whether, in his instance,
was not accompanied with blame—*the care*
leader without intermission to this important
e looked upon as ill-bestowed. One practical
plan of protection which regards the indigent, in the lump,
icious—either as objects of pure compassion, or as objects
neglect—must be fatally erroneous.

XV. *and* XVI. *may be comprised under the more general*
NGEROUS Classes:—Classes XVII. *and* XVIII. *under*
ABLE Classes. *In the case of the* Dangerous *Classes, the*
rstand Relief suitable to their condition) is beyond compari-
the case of the industrious: *the latter requiring to be taken*
kes only; the former for their own sakes, and for the sake
e, whose security they endanger.

XI. OUT-OF-PLA
ex.

1. Labourers, *on completion of the job—*
2. ——— *on disagreement with the*
ployer, through the Labo
fault—
3. ——— *through the Employer's fau*
4. Journeymen—Manufacturers—Handic
men and—Artists—Shop-keepers
Warehouse-keepers, *on the shutting-*
the Manufactory, Shop, or Warehou
reason of death, failure, or leavi
business—
5. Journeymen—Manufacturers—Handic
men and—Artists—Shop-keepers
Warehouse-keepers, *on disagreemen*
the Master, through the Servant's fa
6. ——— *through the Master's fa*
7. Seamen, *on completion of the Voyage*
struction, capture, or breaking-up
Ship—or on disagreement with the
mander, through the Seaman's fault-
8. ——— *through the Master's fault—*
9. Domestic Servants, *on the death, or*
abroad, of the Master—the breaking-
reduction of his establishment—or on
greement with him, through his fault-
10. ——— *through the Servant's f*
11. Domestic Servants, discharged w
Characters, *through the Servant's fa*
12. ——— *through the Master's fa*

X. CASUAL-STAGNATION HAN
ex. gr.

13. Husbandmen, *on the conversion of*
into Pasture—
14. Canal-Diggers, *on completion of the*
15. Miners, *on the failure or working out*
Mine—
16. Quarrymen, *on the working out of the Q*
or failure of the demand—
17. Manufacturers, *in the event of a*
stagnation of the Manufacture—
18. Handicrafts and Artists, exercising
tions dependent on Fashion—*on*
of the Fashion.

XI. PERIODICAL-STAGNATION H
ex. gr.

19. Watermen, *in winter time—*
20. Gardeners, *in time of long-continued*
21. Bricklayers, *in time of long-continu*
or rain.

XII. DISBANDED HANDS; *ex.*

22. Soldiers, discharged *upon a peace—*
23. Militia-men, disbanded *upon the exp*
of their term—
24. Marines, discharged *upon a peace—*
25. Seamen (King's,) discharged *upon a*

XIII. SUPERSEDED HANDS; *e*

26. Manufacturing Hands, rendered
ous *by the introduction of*

ockets—
hway [illegible], including
otpads—
sebreakers—
ndiaries—
ers—
ts, including Gaming-Cheats, Sharpers, Swindlers, and other tainers by false Pretences—
gglers—
gers—
urers—
iers, Militia-men, Marines and amen, drummed out, or otherse discharged with infamy.

Pardoned, or at large after expiration of their sentence.

XV. SUSPECTED HANDS.
ses from 1 to 9 as above, acquitted or fter trial or examination) discharged thout punishment, *through uncertainty guilt, or technical defect in procedure or idence*—
dren, under age, *living with parents, &c. longing to Classes* 1 to 7.

. UNAVOWED-EMPLOYMENT HANDS.
ses 1 to 7—
sies, *viz.* occasionally Fortune-tellers, . Cheats; occasionally Thieves—
rters.

XVII. LAZY HANDS.
gars (*Habitual.*)

XVIII. UNCHASTE HANDS.
titutes—
hers of Bastards—
e Women—
hel-keepers (female)—
uresses.

unt of Character and Acquaintance.

X. STRANGE HANDS; *ex. gr.*
vellers (English) *whose money is exusted*—
-comers, *whose money and work are exusted*—
igners (in regard to English law,) *viz.*
—— 1. Scotch—
—— 2. Irish—
—— 3. British Colonists—
—— 4. United Americans—
igners, in point of language as well as vernment—
grant Foreigners, *driven from home in ultitudes at a time*—
wrecked persons of the several descripns as above (22 to 26), *cast destitute on y part of the English coast.*

Forced Exclusion from Work;

In which case may be

XX. CONFINED HANDS.
ected Hands as above (1 to 10) *comtted on mesne process*—
nquents (inferior), *on mesne process*—
—————— *in execution*—
tors, *on mesne process*—
—— *in execution.*

XXI. PAST-PROSPL. HANDS—

INCLUDING

XXII. DECAYED-GENTILITY HANDS—

who may be distinguished in respect of the several

Causes of Impoverishment,
VIZ.

1. *Fire*—
2. *Inundation*—
3. *Shipwreck*—
4. *Earthquake*—
5. *Tempest*—
6. *Fall of Buildings, &c.*—
7. *Ravages of Vermin*—
8. *Bad Seasons*—
9. *Mortality among Cattle*—
10. *Theft, or other predatory Offences*—See Col. VII. 1 to 9.
11. *Deleterious Offences, originating in enmity or any other motive*—
12. *Bankruptcy, or failure, without a man's own fault*—
13. ——— *by a man's own fault*—
14. *Dissipation, on a man's own part*—
15. ——— *on the part of those for whom he is responsible—as wife, children, agents, &c.*
16. *Litigation*—1. *unavoidable*—
17. ——— 2. *blameless*—
18. ——— 3. *rash*—
19. ——— 4. *malicious*—
20. *Burthensome Obligations*—*in the way of*—1. *Taxes*—
21. ——— 2. *Maintenance of children or other relatives*—
22. *Depredation or devastation by the enemy.*

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SITUATION AND RELIEF OF THE POOR.

By JEREMY BENTHAM, Esq.

ADDRESSED TO THE EDITOR OF THE ANNALS OF AGRICULTURE.

Queen's Square Place, Westminster,
8th September, 1797.

Dear Sir,—It was but t'other day that I became master of a complete series of your Annals:—accept my confession, and record my penitence. Having, on my return from my long peregrination on the Continent, lent to a friend—who had lent to another friend, whom we neither of us could recollect—the twenty-five or thirty numbers which I had taken in before that period, I postponed from time to time the completion of the series, in hopes of recovering the commencement of it. When at last shame and necessity got the better of procrastination, what a treasure of information burst upon me!—No—so long as power without——and without——shall have left an annual guinea in my pocket (blanks are better here than words) not a number of the Annals shall ever be wanting to my shelves.—Hold! —don't take me for a Jacobin, now; nor even for a croaker—What I allude to, is not any *common* burden—such as you land-owners and land-holders grunt under:—but my own ten thousand pound tax—my *privilegium*—a thing as new to English language, as it is to English practice—sole and peculiar fruit of the very particular notice with which I have been honoured by — ——.

This waits upon you with a proof of a blank Pauper Population Table: being a Table framed for the purpose of collecting an account of the Pauper Population in as many parishes, &c., as I may be able to obtain it from. Knowing so well your zeal for all zeal-worthy objects, and mindful of your often experienced kindness, I cannot on this occasion harbour a doubt of your assistance. But in what shape will it be most convenient and eligible for you to give it me? Will you reprint the *heads* alone, upon the plan of common letter-press, and without the form of a table? or will you accept of an impression, of the same number as that of the Annals, for the purpose of annexing a copy to each copy of your next number? This latter expedient, should it meet with your approbation, would lessen in a considerable degree the trouble to any such gentleman as may be disposed to favour me with their contributions.

Is it worth while to give the Table this indiscriminate kind of circulation? At any rate, your Editorial Majesty will I hope be pleased graciously to grant unto me your Royal Letters—*patent* or *close*, or both, addressed to *all* —and, if need be—*singular*, your loving subjects, my fellow-correspondents;—charging and exhorting them, each in his parish—and as many other parishes as may be—to fill my Tables, and send in their contributions.

Along with the Table you will find a MS. paper, exhibiting the importance of the information I am thus labouring to collect: you will print it in your Annals, or, suppress it, as you think best. The danger is, lest there should be some, who, though they might otherwise have been disposed to furnish the information desired, may perhaps shrink back at the idea of the applications that might be made of it to the economy of the parishes in the management of which they may respectively happen to be concerned. A gentleman, who bears a principal part in the management of one of the great London parishes, had with more than ordinary alacrity consented to a general request of information. I sent him a pair of Tables, and (though this account of the *use* was not with them) he returned them with an excuse.

I also send, in MS., a *Table of Cases calling for Relief*:—a general Map of *Pauper-Land*, with all the *Roads* to it. Few, if any, of the projects I have seen, but what have appeared (the *arch-project* not excepted) to bear an exclusive—at least a *predilective*—reference to some of these cases, overlooking or slighting the rest. I send it in the state in which I propose printing it for my own book; but, in the meantime, if it be worth the honour of a place in the *Annals*, it is altogether at your service. This preparatory insertion will turn to the advantage of the work itself, if any of your Correspondents (not forgetting their Editor) would have the goodness to contribute their remarks to the emendation of it. You will not easily conceive—few heads, at least, but yours are qualified to conceive—the labour it has cost me to bring the two Tables to this state. As to the work at large, it will occupy two independent, though connected, volumes. *Pauper Systems compared*:—*Pauper Manage-*

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ment improved;—the last the Romance, the Utopia, to which I had once occasion to allude. —Romance!—how should it be anything *less?* —I mean to an Author's partial eyes. In proportion as a thing is excellent, when established, is it anything but *romance*, and *theory*, and *speculation*, till the touch of the *seal* or the *sceptre* has converted it into *practice?*—Distress, at least—distress, the very life and soul of Romance, cannot be denied to mine: for in this short and close-packed specimen, already you behold it in all its shapes.—Magnanimous President!—accomplished Secretary!—Ye, too, have your Romance.—Heaven send you a happy catastrophe, and the *fettered Lands* a "*happy deliverance!*"—Patience! patience!—Ye, too, before you are comforted, must bear to be t mented.

Apropos of Presidents—the *High Prie Ceres* having divined, or not divined, my rec occupations, has been pleased to send me mandate in form, summoning me to dev myself to this branch of his Goddess's servi that the fruits of my labours may be cons crated in her Temple at Whitehall:—so tha whatever other requisites may fail me, I sha be in no want of *auspices*. Continue yours i me;—and believe me, with the most serio respect,

Ever your's,
JEREMY BENTHAM.

ARTHUR YOUNG, Esq., &c. &c. &c.

OBSERVATIONS ON THE PAUPER POPULATION TABLE HEREUNTO ANNEXED.

Showing the novelty, as well as use and importance, of the information that would be afforded by a set of Tables, one or two from every Parish or other Pauper District, filled up upon the plan of the blank Table here exhibited.

THE stock of information here in question constitutes what will be found to be an indispensable groundwork to every well-digested plan of provision that can be framed in relation to the Poor. For some of the classes a peculiar *mode* of *provision* is requisite, different as between class and class; as in the case of *infants, lunatics, idiots*, the *deaf and dumb*, and the *blind*. The rate of *neat* expense per head, as between class and class, is also susceptible of a very extensive scale of variation: the *quantum* and *value* of *return*, actual or possible, in the way of *labour*, by the produce of such labour, is again susceptible of a scale prodigiously more extensive.

1*st*, To consider the variation where *infirmity*, whether of *mind* or *body*, is the constituent character of the class. In the case of *lunatics*, for example, the average rate of expense per head is probably double, at least, to what it is in the case of a person of sound mind, and of the same age, able or not able to work:* profit by labour of course nothing:—yet in a set of *appropriate* establishments, set apart for the reception of persons of this class, not only might the expense per head be reduced to the ordinary level, but in many instances a quantity of profit might (it is supposed) be extracted from their labour, to the advantage of the individual himself, in the way of medical relief, or even cure, no less than of the public in the way of economy: an observation which, as far as *economy* is concerned, applies in a greater or less extent to the *other* classes above exemplified; viz. *idiots*, the *deaf* and *dumb*, and the *blind;* to which may be added the various sorts of *cripples*.

So again, where the variation in point of neat expense has no other cause than the difference between *age* and *age*. In the case of a *full-grown* person, capable or not capable of work, (to take the *male* sex, for instance,) the amount of necessary *expense*, everything included, may, when compared to the case of a child of three or four years old, rise perhaps to *twice* as much; while, on the other hand, in the case of an individual of the same sex, possessing an ordinary degree of ability in regard to work, and full grown, whether arrived or not at what is properly termed the age of *manhood*, the capacity of affording, in the shape of labour, a *return* for the expense, (I speak of mere *natural* capacity,) may be from sixteen to twenty times as great as in the child; even supposing the child to stand already upon the *working* list, and to be earning every day a sum worth taking into the account; and therefore, when compared with a child not yet set to work, the capacity of the man, or full-grown boy, may be as sixteen or twenty to nothing.

Between these two extremes in the scale of profit and loss, there will be a series of perceptible gradations, at least as many as there are between year and year of age: insomuch that, although the total number of a parish stock of pauper boys were known, no tolerable calculation could be made of the quantum of

* In St George's and St Andrew's, Holborn, for example, no less than 8s. a-week for board and attendance.—This was in the year 1791; when the average expense of an ordinary pauper was, in the same establishment, not so much as 1s. 10d. a-week, —£4, 15s. 3d. a-year. In the country, in some of the parishes reported by Sir Frederick Eden, 4s. a-week; in others, 3s. 6d.

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rofit or loss capable of being derived, or likely) accrue, from that stock, unless the proporons in which that number is divided betwixt he different ages were known, not less than a ear being taken for the interval between age nd age.

Simple and incontestable as these truths, hen once pointed out, may appear, so imperect are the advances as yet made in the arts f *management* and *book-keeping* in this line, hat in no instance that has yet been made ublic, has any complete statement been ever iven, in the accounts of any house of industry, r other poor-house, of the different varieties f condition in respect of *infirmity*, *birth*, *parentage*, &c., as expressed in this table: and in regard to *age*, the distinctions made have seldom gone beyond those between *men* and *women* on the one hand, *boys* and *girls* on the other; or, if anything has been said of *age*, the distinctions have been so few, that little, if any, additional information has been to be collected from that source.*

Distinctions thus loose will be apt to mislead rather than to inform. Individuals between whom there shall exist no difference at all, in respect either of profit or loss, are thus ranked under *different* classes; while individuals between whom the difference in respect of profit and loss stands at the very highest pitch, as 8 or 10 to 1, or as 8 or 10 to 0, are ranked under the *same* class. A *boy* of twenty shall earn quite as much, as well as consume as much, as a *man* of twenty-one. The same *boy* shall consume twice as much as another *boy*, the boy of three or four years old, for example: at the same time that, while he is *costing twice* as much, he might, on the other hand, be made to *earn* from sixteen to twenty times as much; the earnings of the boy of twenty years old rising as high as eight or ten shillings a week: while, for the boy of three or four years old, if he earns anything, sixpence may be full pay. True it is, that where (as above supposed) there happens to be *profit* as well as *loss*, *earnings* as well as *maintenance*, so that the account has *two* sides, whatever error there may be on the side of *loss*, will operate, as far as it goes, in *compensation* of the error on the side of *profit*. But where the *capacity* of yielding profitable labour is *wanting*, (as in many individuals in each parish,) or not *improved* into *act*, so that there is nothing on the profit side of the account, (as in most parishes,) whatever error results in regard to the expense of maintenance stands single and uncompensated; and, on the other hand, where there *is* something on the profit side of the account, the error may, instead of two hundred per cent. as in the other case, rise as high as eight hundred or a thousand per cent.

Such being the difference in point of value, as betwixt *boy* and *boy*, (laying aside, for shortness sake, *men*, *women*, and *girls*,) observe the difference that may result in the *boy account*, as between *parish* and *parish*.

Take two parishes, *Bigham* and *Littleton*—numbers of every class the same in the one as in the other. Not to have recourse to any such extraordinary supposition, as that at *Littleton*, they shall be, all of them, below (what, if the expression be allowable, may be termed) the *workable* age, and therefore yielding *no* earnings at all—at *Bigham*, all of them at the age of *highest* earnings; let us suppose that at *Littleton* those *below* the workable age and those *above* it being put together, the capacity of affording profitable labour is, upon the whole stock together, the same as if the whole was at the *lowest* workable age: while at *Bigham*, that capacity is upon the same footing as if the whole stock were at the age of *half* earnings; viz. the age at which, instead of earning from 8s. to 10s. as before, a boy *might* be made to earn from 4s. to 5s. All this being supposed, observe the errors it is likely to give birth to, as well in regard to the quantity of *natural strength*, as in regard to the goodness of the *management*, as between house and house. The number of boys being the same in the one as in the other, if in *Bigham* the sum of the earnings were from four to five times as great as in *Littleton*, (ages being by the supposition unknown,) the management under this head would naturally appear *four* or *five* times as good: whereas, in fact, it is not above *half* as good; for, had it been equally good, the *actual* earnings would have been as the *capacity* for yielding earnings; whereas they are but half as great.

In the pecuniary value, *positive* or *negative*, of the individual, there is another ingredient in respect of which this lumping distinction, between *men* and *boys*, affords no sort of light; nor will any division, of less minuteness than that into *years of age*, be sufficient to the purpose. The value of a child, in this point of view, will depend not only upon the *present* value, positive or negative, but upon the quantity of *negative* value *past*, and the quantity of *positive* value yet *to come*. Suppose fourteen years the age at which boys go off in both places, and let the total pecuniary value of the stock of hands (take it either in regard to *ac-*

* The information here called for, new as it is to pauper economy separately considered, constitutes, it is true, but a small portion of the statistical matter that would be exhibited by a *Census*, constructed upon the excellent plan contrived and exemplified by that indefatigable philanthropist Mr William Morton Pitt. But, besides being the part the least difficult to collect, it is the only part directly applicable to that portion of the population, the concerns of which I have ventured to take in hand.

A few of the distinctions that will be found here do not appear upon his Table; the parish which was the theatre of his operations, not affording exemplifications of them: as to the rest, whatever lights may be found here are but *borrowed* lights, drawn from that most respectable source, collected into a focus, and thrown upon this particular spot.

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tual earnings, or in regard to the *capacity* for yielding earnings) be equal in both places. Yet, for a period of six or eight years, the difference may be prodigious. At *Bigham* the positive part of the value may be derived—the earnings obtained—from a set of boys, who, wanting but a few weeks or days of fourteen years of age, are on the point of going off, (the rest being composed of boys below, or little above, the commencement of the *workable* age.) This elder part of the stock being gone, the value may sink to little or nothing; and so remain, even for years: while, in *Littleton*, the same value shall be afforded by a stock of boys of no more than seven or eight years old; whose value will, for six or seven years to come, be every year on the increase.

Averages (it may be said) may be taken.—Yes, so they may, with the benefit of proper *data*; but those *data* are wanting here. When a *series* is given, composed of terms having a common *difference*,—a first and last term consequently given,—the middle term gives the average. Here the *lowest* term *is* given, it is true; it is the day of birth—number of *years* 0, in all places: but the *highest* term, the highest age up to which a boy, sound in mind and body, stays upon the parish, is *not* given. What this highest age is in general, we do not know. It is as high again in some parishes as in others; and averages will not do here. In one parish, children shall go off at eight, seven, and six years old; in another, not till fourteen, fifteen, or even sixteen years old. We know, in general, that the differences in this respect are very great; but what they amount to we do not know. To suppose—first a lowest term—then a highest term—then an equal number of each—or a regular series from the one to the other—and so strike an average, would be altogether a random shot.

These (it may be said) *are extreme cases, and not likely to have place anywhere.*—Admitted: nor are they given but as extreme cases: they are given as the utmost limit to which error can extend itself. But below this *im*probable degree of aberration, how many other, yet still high degrees, are there, that *are* probable?—A difference—an error, to the amount of cent. per cent. can scarcely be stated as *im*probable. But what would be the fate of that mercantile adventure, in which as much capital again as was necessary had been expended, or not above half as much as was necessary had been provided; or which, in return for that advance had reckoned upon twice as much labour as the establishment had afterwards been found capable of affording, and this for many successive years.

For my own part, I must confess, I am unable to conceive how any plan of general economy in this line can rationally be attempted, without something like an estimate of the *mouths* to be fed, as well as of the *hands* to work with.

To give an idea of one general application, which I propose to make, of whatever information I might be fortunate enough to obtain, I will subjoin a sketch of a table I have been attempting to frame, and which for shortness might be styled the *Non-Adult Value Table*.

As to the particular uses that might be derived in *practice* from the information thus particularized, the case of *lunatics*, and other *infirm* classes, has already afforded *one* example. Among *infants*, the *destitute* class, comprehending bastards, orphans, foundlings, and deserted children, may afford *another*. Of these, no inconsiderable share of the whole pauper population would be found to be composed. Upon an average taken from the pauper population of a considerable number of parishes, bastards alone composed about a *ninth*.

Under a certain age, none of the individuals thus denominated being capable of any special attachment to person or to place, nor any other individual being likely to possess any very special attachment with regard to *them*, this absence of natural connexion might afford room for transferring them, without hardship, and in any numbers, to any proper situation or situations, if the state of the laws were such as to admit of such an arrangement, and the interest of the public, in point of economy or any other head of advantage, with reference either to the public or to the children themselves, were to demand it. During the age of *sheer expense*, for example, transference to a situation where the *expense of maintenance* is at the *lowest*: at the age of ability, or commencing ability, with regard to labour, transference to situations where the demand for labour is at the *highest*.

Thus much for illustration, and for illustration merely. To exhibit this or that arrangement as a proper one, would be to insert, into a petition for materials, the work itself for the construction of which they are desired. Advantages crowd in on one side, objections on the other; but this is not a place for striking the balance.

Were the several other classes to receive, each of them, a separate consideration in this view, many other proofs would appear of the importance of the information sought for by these tables; but the subject could not be thus exhausted, without plunging into the details of the particular plan, for the purpose of which these tables were contrived.

As it is, two points appear sufficiently established:

1. One is, that, whether quality or quantity of the demand in the way of supply for maintenance—or prospect of return in the way of labour—or quality or quantity of the demand in respect of the stock of requisites for the extraction and application of that labour—be considered, no well-grounded plan of provision, in relation to the pauper community, can be framed, without the stock of information sought for by these tables.

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2. That no such stock of information has ever *hitherto* been obtained, or at least made public, from any ONE place, much less from any assemblage of places, considerable and various enough to be considered as affording an adequate sample of the pauper population comprised within the territorial authority of the poor laws.*

Numbers I infer from *expense:* total numbers of the whole pauper population that *would* be to be provided for, from the known totals of *past* expense, compared with expense per *head* as far as it can be ascertained: then say —as the total of the pauper population, in any set of pauper districts, according to the tables when filled up for those districts, is to the total of pauper population in the whole number of such districts in South Britain, so are the numbers of the several *classes*, in the same *parts* of the country taken together, to the numbers of the same classes in the *whole*.

OBSERVATIONS ON THE TABLE OF CASES CALLING FOR RELIEF, HERETO ANNEXED.

Pauper-Population-Table—Table of Cases calling for Relief: Why make *two* tables!—why not give the matter of both in *one?*

Answer—The *Pauper-Population-Table*, being contrived for a particular purpose—that of collecting information—such classes, and such only, were inserted in it, as afforded a hope, that the numbers of each might be found capable of being collected. A minute investigation, of the difference between two tables framed for different purposes, would be of little use: the general account of the matter is this. The classes, of which the respective numbers are here inquired after (the classes comprised in the Pauper-Population-Table) compose what may be considered as the *permanent* stock of pauper hands: in the *Table of Cases calling for Relief* are designed to be comprised *every* class, and every individual that can ever enter into the composition of the general mass:—the *coming-and-going* stock, as well as the *permanent:*—the *able-bodied*, as well as the *infirm:*—those who, under the existing order of things, come in but for *casual relief;* as well as those who, under the system of *community-maintenance*, are *constantly* in the *House;* and those who, under the system of *home-maintenance*, are *constantly* upon the list of *pensioners*.

A single glance at the Table of Cases calling for Relief, will be enough to show, that among the classes there exhibited, there are more than one, of the respective numbers of which no general returns could reasonably be expected. Such are all the *degraded* classes; those whose condition shuns the light; reputed *thieves*, and other *depredators—deserters—beggars—prostitutes*.

To state the particular use, the contemplation of which gave birth to each distinction, would be to state the particular plan of provision in contemplation for each class:—to state the particular plan of provision in contemplation for each class, would be to give the entire work of which this paper is but an offset. Thus much, however, may be observed, that, of all the classes there distinguished, there is not one, the circumstances of which have not in the framing of the plan of provision been specially taken into account.

OUTLINE OF THE NON-ADULT VALUE TABLE.

Contrived for the purpose of exhibiting (whenever the requisite data *can be obtained) the pecuniary value, negative or positive, of the service of a pauper, or other individual (*i. e. *expenses and returns by labour on account of such individual)* at *and* up to *different* years of age, *from birth to twenty-one years complete.*

I. DATES AND AGES.

Column 1. Day, month, and years of our Lord —twenty-one in number—taking a determinate period for the sake of illustration: viz. from 1st January, 1800, to 31st December, 1820, both inclusive. N.B. For some purposes it may be found of use to divide the whole term into *half-yearly* instead of yearly periods—Say, then, half-yearly.

Column 2. Correspondent column of half-years of age: viz. from birth to half a year old; from half a year to a year; and so on.

II. EXPENSES TO BE PROVIDED FOR, WHICH, AS FAR AS THEY GO, GIVE THE VALUE NEGATIVE.

Column 3. Expense of diet

Column 4. Ditto, clothing—*materials*.

Column 5. Ditto, ditto, *making*.

Column 6. Ditto, ditto, *washing* and *mending*.

Column 7. Individual's share in the *common* and *indivisible* expenses of the establishment.

Column 8. Totals of expense (to be provided for before hand) during and *for* the several half-years commencing on the several days.

Column 9. Totals of expense from birth *up* to last days of the several ages; *i. e.* up to the

* Among the highly valuable collections of Sir Frederick Eden, are *Censuses* of the Pauper Population of thirty-one Parishes. Unfortunately there are few, if any, of them applicable to this purpose. After a string of individuals distinctly characterized comes a "family," number of members not mentioned. Age, likewise, though in most instances given, is in several instances omitted. *Proportions* taken from such *data* would evidently be false; the uncertainty that envelopes particular articles communicating itself to the whole.

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ends of the several half-years commencing on the several days.

III. RETURNS TO BE EXPECTED, WHICH, AS FAR AS THEY GO, MAKE THE VALUE POSITIVE.

Column 10. Earnings *for* the several half-years commencing on the several days.

Column 11. Earnings from birth *up* to the ends of the several half-years, commencing on the several days.

IV. BALANCES WITHOUT ALLOWANCE FOR DEATH OR SICKNESS.

Column 12. Balance of expenses and returns *for* the several half-years commencing on the several days; giving the value, whether *positive* or *negative:* negative, of course, for the first years; positive, if at all, not till after a number of years.

Column 13. Balance of expenses and returns, from birth *up to* the ends of the several half-years commencing on the several days; giving at first a negative value, then perhaps a positive value, as before.

Column 14. *Present* clear value of the service of a pauper (or other) hand; on the supposition of its being to be performed during the several half-years of age commencing on the several days:—Value, at first negative, then positive, as before. By *present* is meant on the day of the commencement of the term; viz. 1st Jan., 1800; supposing the future profit or loss were to be contracted for on that day.

Column 15. Present clear value of the *whole* period of service *up to* the ends of the several half-years commencing on the several days.

V. RATE OF MORTALITY ASSUMED FROM A STANDARD TABLE.

Column 16. Number of *influents* * into the respective half-years of age—(Number of influents into age stated, for the purpose of calculation, at 1000 or 10,000.)

Column 17. Number of *decrementalists (effluents* by death) dying, according to the standard-table, in the course of the several half-years of age.

Column 18. Number of *remanents* at the ends of the several half-years of age.

VI. BALANCES AFTER ALLOWANCE FOR DEATH AND SICKNESS.

Column 19. Present value (deduced from the above standard-table) of the half-year's service of a pauper taken at the several ages, and supposed to accrue at the end of the several half-years commencing on the several days;—allowance made for the chance of *death*, according to the foregoing standard-table.

Column 20. Present value of the *whole period* of service from birth *up to* the ends of the several half-years, commencing on the several days; allowance made for the chance of death, as before.

Column 21. Present value of the half-year's service of a pauper, taken at the several ages, and supposed to accrue at the end of the several half-years commencing on the several days;—allowance made for the chance of death and *sickness*. (The chance of *sickness* taken from Dr Price.)

Column 22. Present value of the *whole period* of service, from birth *up to* the ends of the several half-years commencing on the several days;—allowance made for the chance of death and sickness, as before.

Column 23. Values, *at* the several *successive* ages of the whole of the period of service, *remaining* at these respective ages;—allowance made for death and sickness, as before.

Tables upon this plan, one for each sex, had actually been constructed under my direction; the numbers of the different ages being taken from the *Censuses* reported, as above, by Sir Frederick Eden, and the rate of mortality taken from Dr *Halley's* Breslaw Table, which, on account of the roundness of the assumed number of *influents* (1000) seemed most convenient for the purpose. But (on examination,) the *Census* taken from Sir Frederick Eden being found inapplicable to this purpose, and Dr Halley's table being found to labour under a very material error, not noticed by Dr Price, or any other of the many mathematicians who have made use of it, all the calculations that had been grounded on either of these bases have been given up; and it is to supply the deficiencies thus left that the information described in the blank Pauper-Population-Table is desired.

The value I take from the value of an adult employed at day-work on the lowest paid species of work, (agricultural,) on an average of the whole of South Britain; supposing the value to rise up to that pitch, by equal gradations, commencing at the earliest *workable age*. To get at the average in question I am ransacking, or causing to be ransacked, all the books I can lay hands on, in particular the Agricultural Reports. Your science, were I fortunate enough to have it within reach, might abridge the labour as well as secure the ground. You will recollect my question, to which you were kind enough to send me an answer, about the *maximum* of earnings, in a gradation formed by *age*.

What say you to this idea of forming a valua-

* The term *decrementalists* is derived from Dr Price's expression, "*Decrements of life*," which did not appear to exhibit the simple matter of fact in so clear and unambiguous a point of view. The terms *influents* and *effluents* (analogous to the mathematical terms *fluxions* and *fluents*) have been added, together with the term *remanents*, as being requisite to make up a nomenclature competent to the purpose.

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tion of that part of the national live stock which has no feathers to it, and walks upon two legs? Is it new or old?—If old, can you tell me where it is to be found? I do not mean in the head of what West Indian, but in the tables of what mathematician or statisticalist? For strange it would be if the term *value* had less propriety when applied to the labour of the freeman than to that of the slave. Is an *average* child at his birth—supposing him certain of not living beyond the age of one-and-twenty years complete—worth *more* or *less* than no*thing* to those (himself of the number) who, during that period of legal, as well as natural, subjection, have the benefit of his capacity for labour at command? If more than nothing, at what age does he become so? Whether worth more or less than nothing, can he, by any, and what means, be made worth more? If worth more than nothing, how comes it that in an *old*-planted country, such as *England*, (whatever may be the case in a *new* planted one, such as *America*,) a child is, in every class without exception, regarded as a burden (I mean always in the pecuniary sense) to its parents? This deficiency in point of value, is it necessary and irremediable, or accidental and remediable? Is it *absolute* or *relative* only, (I mean with *relation* to the *parents*,) or partly absolute and partly relative? In other words, is it that a child has not, by the end of the period in question, produced so much as he has consumed; or that, though what he has produced be *in itself* considerably *more* than what he has consumed, yet, with reference to his *parents*, it is *less*, on account of their having *expended* more of what he has *consumed*, than they have *received* of what he has *produced*? In proposing to you these questions, I give you a clue, which, if it be worth following, will lead you to one of the main pillars of my plan;—an enigma which you, and, if you please, your correspondents, may amuse yourselves with, instead of a *rebus*, or a *mathematical problem* from the Ladies' Diary.

My scale, you will observe, extends no farther than from the bottom to the summit of the *hill of life:* not that either the *Table-Land* at the top, or the descent on the other side, are undeserving of mensuration; but they do not lie within my present department; except the narrow slip at the very bottom, which belongs to *Pauper-Land*.

Amongst the different plans in relation to the poor, you lean, I observe, to that of Mr Ruggles: that being the case, I flatter myself with the pleasure of seeing you and your intelligent friend on my side. His plan is mine:—add only certain sources of *profit*—certain sources of *saving*—certain means of obtaining *capital*—not from the *unwilling*, but the *willing*—certain securities for good *management*—and certain other *et cæteras*, in which the welfare of the pauper community is not forgotten, and which, I hope, you will both approve of.

Some prefer *home*-provision in *toto:* but this will not do for those who have no home; in particular not for the destitute classes of children, for which see the table.

Others prefer *working*, without boarding or lodging, or *working and boarding*, without lodging, to *working, boarding, and lodging:* but this, again, will not do for those sons of indigence who have not where to lay their heads.—Look once more at the table.

Some are for doing everything by *savings* out of *earnings;* but this will not do very well where there can be no savings, still less where there can be no earnings.—Another glance, if you please, at the table.—Bating these cases, the recipe is good for the provident. Unfortunately, the bulk of labouring hands, especially the high-paid ones, is composed of the improvident. Providence may, by proper facilities, (for encouragement is scarcely necessary,) be rendered *more general;* but man must be new made, before it can be made universal.

Some think they annihilate the burden, when, from shoulders that cannot *but* be able to bear it, they shift it upon shoulders that may or may *not* be able to bear it; from shoulders more able, to shoulders less able; or from shoulders that *are* used to it, to shoulders that are *not* used to it: or, when instead of *rate* they write *subscription:*—like the old statute, which, to reconcile the farmer to a set of officers, who plundered him under the name of *purveyors*, ordered them to be called *caterers*. If this does with *poor-rates*, try it upon *tithes*, and call them *offerings*.

One gentleman (for whose probity of intention I would be security, though I have not the honour of his acquaintance) takes the burden from the shoulders of the man of property, and lays it upon those of the man of hard-pressed industry, who, unable to find subsistence among his friends and neighbours, is driven to hunt for it among strangers. An improvement this, at any rate, upon the existing laws; since a tax, so long as it is paid, is less heavy than a prohibition.

In some such ways as these we begin, all of us; and if we did not begin a little at random, how would anything ever be done?

Come, my Oedipus, here is another riddle for you: solve it, or by Apollo!———You remember the penalty for not solving riddles.—*Rates* are encroaching things. You, as well as another illustrious friend of mine, are, I think, for *limiting* them.—Limit them?—Agreed.—But how?—Not by a prohibitory act—a remedy which would neither be applied, nor, if applied, be effectual—not by a *dead letter*, but by a *living body:* a body which, *to stay the plague*, would, like *Phineas*, throw itself into the *gap;* yet not, like *Curtius*, be swallowed up in it.

When I speak of *limitation*, do not suppose that limitation would content me. My *reverend* friend, hurried away by the torrent of his own eloquence, drove beyond *you*, and let drop something about a *spunge*. I too have my

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spunge; but that a slow one, and not quite so rough a one. Mine goes, I promise you, into the fire, the instant you can show me that a single particle of necessity is deprived by it of relief.

One thing we shall not differ about;—the priority due to agriculture, and the necessary non-productiveness of every system of pauper-employment in which manufactures come in on any other footing than a supplemental one; to take off such part of the *strength* of an establishment, and such part of the *time*, as cannot be employed in producing food for it.

One thing I thank him for—(I should have said Mr Ruggles)—the confirming by his professional science a hope fondly nourished by my ignorance, that under such a system of management, as, if not already exemplified anywhere, might be framed at least for the purpose, employment might be found, even in agriculture, for almost every species of infirmity—for almost every modification of *refuse* labour. Stationary force being found by inanimate, ambulatory by animated Nature, how very little strength, and even how very little practice, is necessary in a *guide!*—and even supposing—what is not the case—there were nothing but girls for the plough, would not even a girl be better employed now and then at the plough, than spinning her health away, and earning twopence?

But away with party—away with exaggeration:—neither clothing nor lodging, any more than food, can be excluded from the catalogue of necessaries. In the principle of *self-supply* behold another of my sheet-anchors: and *that*, after giving two-thirds to agriculture, leaves one for manufactures. The principle of *self-supply!*—what say you to it?—Does the *term* explain itself?—Does the idea recommend itself?—Quit that—especially such part of it as looks to agriculture—and I divide your poor-houses for you—call them what you please—Houses of Industry—Schools of Industry—into two parcels:—one, the ill-managed, employed in ruining *themselves;* the other, the well-managed, in ruining their *neighbours.*—Assertions are not proofs; but announce the theorem—and another time, if it *can* be necessary, you shall have the demonstration.

This (you will say to yourself) is a sad *farrago*—but your miscellany, how superior soever to others in subject-matter and contents, has this in common with them—that half-formed ideas—so they have but matter in them—are not prohibited from presenting themselves. It is part of the character of your correspondents, to have more of *substance* about them than of *form:* and of the many recommendations which join in drawing so much good company to your *conversatione*, one, nor that the least, is the convenience of being admitted to it in *boots.* Mine (you will say) have hob-nails in them: for, somehow or other, the very idea of the person to whom I am addressing myself, has insensibly betrayed me into that sort of playful confidence—that *épanchement*, as I think the French call it—which I have always felt in his company. The opportunity of laying plans, before a sort of open committee, in an unripened state, and for the purpose of getting help for ripening them, before they have yet received the form they are to wear when presented at the bar of the public, by which they are to be tried, is a serious advantage; and as such, if you afford me any encouragement, I am not likely to be sparing in availing myself of it.

P.S.—For your next Number, or next but one, I don't know but I may trouble you with a compressed *Sketch* of my *two above-mentioned works*, or one of them:—something between the work at large, and a mere Table of Contents. Imperfect it cannot but be, were it only for want of the *data*, the obtaining of which is the principal object of the trouble I am giving you at present.

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OUTLINE OF A WORK

ENTITLED

PAUPER MANAGEMENT IMPROVED.

To be filled up, and the work published in one volume octavo, as soon as a sufficient number of the communications solicited in Vol. xxix. No. 167,* *of the Annals of Agriculture have been obtained.*

Book I. Political Arrangements.

Section I. *Managing Authority.* 1. The management of the concerns of the poor, throughout South Britain to be vested in *one*† authority, and the expense charged upon *one* fund. 2. This authority, that of a *Joint-stock Company*,‡ under some such name as that of the National Charity Company.§

Section II. *General Scheme of Provision.* The whole body of the burdensome poor to be maintained and employed, in a system of *Industry-houses*,‖ upon a *large* scale,¶ distributed over the face of the country as *equally* as may be, with each a portion of *land*** (*waste* in preference) at least sufficient for the maintenance of its own population. Utmost number of paupers that *would remain* to be provided for in the *proposed* order of things, say five hundred thousand:††—number to a house two thousand:—number of houses two hundred and fifty.‡‡

Section III. *Ways and Means.* 1. The whole annual produce of the poor rates, taken at a period to be settled, (say the average of the last three years,) or such part of that produce as shall be agreed upon, but subject to such contingent reductions as herein-after mentioned, resulting from a division of the profits. (See Section 9.) 2. The growing produce of the labour of all non-adult paupers, now existing, or hereafter applying for relief, or on whose behalf relief is applied for, beneath a certain age, such non-adults to continue bound to the company in quality of *apprentices*—males, till twenty-one or twenty-three; females, till twenty-one or nineteen: without prejudice to marriage. (See Book ii. Ch. ii. *Separation and Aggregation*—Ch. iii. *Buildings and Land*—Book iv. Pauper Comforts.) For the value of this fund, and for the means of enlarging or narrowing the influx of this class of hands according to the ability of the company, see Book ii. Ch. i. *Classes mustered:* and Book v. Ch. ii. *Pecuniary Estimates.* 3. Ditto of all others—none, however, to be received, but on condition of continuing to work till the value of their labour has balanced the expense of relief—upon an account taken according to certain rules. (See Book ii. Ch. iv. *Princi-*

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* See the contributions to the Annals of Agriculture printed immediately above.—*Ed.*

† Why in *one* undivided authority, embracing the whole country, rather than in a *mixed multitude of independent* authorities, in districts composed of parishes, parts of parishes, and sets of united parishes, as at present, see Book vi. Ch. i. and iii.

‡ Why in a *joint-stock subscription company*, such as the *Bank of England*, *East India Company*, &c., rather than in a branch of *Administration*, such as the *Treasury Board*, the *Admiralty Board*, &c.—Reasons. 1. *Burden* of raising the *capital* annihilated, the contribution being transferred from the *unwilling* to the willing. 2. Security to the rateable inhabitants against *augmentation of the rates* greater, by the amount of the capital subscribed. 3. Probability of *thrifty* management in every respect greater. [See Adam Smith.] 4. Jealousy of *influence*, &c., avoided. 5. Benefit of a distinct *check* from the superintending power of government, &c. &c. [See Book vi. Ch. ii.]

§ For the course to be taken, in the event of an inadequate subscription, see Book vi. Ch. vi.

‖ Community-maintenance, why preferable to private? See a subsequent work, entitled "Pauper Systems compared."

¶ Community-maintenance, on *this large* scale, why preferable to a *small* scale? See ibid.—and see Book ii. Ch. iii. *Buildings and Land:* Ch. iv. *Principles of Management;* Book v. Ch. v. *Prospect of Success;* and Book vi. Ch. i. *Management, why in one Authority, not several.*

** The disadvantages incident to community-maintenance removed, and unexampled advantages produced, by a new plan of construction. See Book ii. Ch. iii: *Buildings and Land.*

†† Grounds for estimating the numbers that *would* be to be provided for at less than five hundred thousand. See Book v. Ch. i. *Population expected.*

‡‡ Reasons why the houses should not be fewer, nor in the first instance more, than two hundred and fifty, and why, *the number being given*, the distance between house and house should be as small as may be. See Book ii. Ch. iii. *Buildings and Lands.*

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ples of Management; and Ch. x. *Book-keeping.*) Such as are unable to balance the account to work in as far as they are able;—but without prejudice to the *suitable* relief of temporary indigence. (See Book iii. Ch. iv. *Temporary Indigence relieved:* and Book iv. PAUPER COMFORTS.) 4. Contingent resources vested at present, in the hands employed in the management of the poor: such as compositions for bastards, forfeitures, &c. 5. Voluntary donations, in as far as concerns the expense of *Extra Comforts.* (See Book iv. PAUPER COMFORTS.) 6. A capital to be raised by *subscription,* on the credit of the above annual and permanent funds. Say from four to six millions. (See Book v. FINANCIAL GROUNDS. Ch. ii. *Pecuniary Estimates.*) 7. Produce of *lands* purchased or rented with a part of the above capital. See *infra* Section 6.

Section IV. *Constitution.* 1. Board of *General Direction* stationed in the metropolis—directors, say twelve or twenty-four; a governor and sub-governor included. 2. Qualification for a *Director* as in the East India Company—3. Qualification for *voting* at election of directors as in ditto.—4. Qualification for voting in assemblies of stock holders, as in ditto. 5. Shares very small,* and determinate;† say £10 or £5.

Section V. *Coercive Powers.* Powers for *apprehending* all persons, able-bodied or otherwise, having neither visible or assignable property, nor honest and sufficient means of livelihood, and detaining and employing them till some responsible person will engage for a certain time to find them in employment, and, upon their quitting it, either to resurrender them, or give timely notice; and so *toties quoties.* (See Book ii. Ch. i. *Employment secured.* Ch. ii. *Mendicity extirpated.* Ch. iii. *Habitual depredation extirpated.*) 3. Powers for apprehending non-adults of divers descriptions, being without prospect of honest education, and causing them to be bound to the company in quality of apprentices. (See as above Ch. iii.) 4. Powers for apprehending insolvent *fathers* of chargeable *bastards* and detaining them until they have worked out their composition money, as per Section 3, *supra,*—also mothers of ditto for a certain time. (See Book ii. Ch. ix. *Child Nursing.*)

Section VI. *Land-purchasing Powers.* Powers for purchasing or renting lands for the erection of the industry-houses, and the maintenance of the population of the several houses, in spots distributed as equally as may be over the surface of South Britain. 1. Lands in separate ownership in each industry-house-district (250, or thereabouts) in quantities sufficient for raising food for the population of the house (say 2000: chiefly aged persons and children.) 2. *Purchase* or *lease* at the option of the *proprietor;* if purchase, the bare value to be ascertained by a jury, and (10) per cent. to be added to that value, in compensation for the compulsion. 3. If lease, term (say twenty-one years) renewable perpetually at the option of either party, at a fresh rent, assessed by a jury; but not to be less than the preceding rent.—4. Indemnification for existing tenants.—5. Compulsion not to extend to land in occupation of the proprietor; 6. nor to land in the occupation of a tenant who has occupied it (say twenty-one years.) 7. Disabilities removed for the purpose of purchasing with consent at any time. 8. In lieu of land in separate ownership, waste land to equal saleable value, consequently in greater quantity—first lease, say thirty-one years, or longer. 9. Timber, in both cases the property of the company:—the only party interested and able to rear and preserve it. (See Book iii. Ch. x. *National Force Strengthened.*)

Section VII. *Obligations.* 1. Obligation of receiving and maintaining every *able-bodied* pauper above the apprenticing age, &c., applying for relief, on condition of his working out the expense of such relief, as per Section 3, *supra*: continuing to him such maintenance, as long as he chooses to accept of it upon these terms. (Highest necessary expense, not so much as 4d. a day: average value of the lowest paid species of labour per day, not so little as 1s.) (See Book v. Ch. ii. *Pecuniary Estimates;* Ch. v. *Prospect of Success;* and Book iii. Ch. v. *Frugality assisted.*) 2. Obligation of receiving every *sick* pauper, as above, applying for relief, and maintaining him till cured; on condition of his working out the expense of relief and cure, as above. 3. Obligation of receiving on the footing of an apprentice, (as per Section 3,) every non-adult pauper beneath a certain age, if presented by the father or other natural guardian for that purpose. 4, 5, 6, and 7. Obligation of exercising the several coercive powers, as per Section 5,

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* *Shares why small?*—Reasons. 1. *Satisfaction* of concurring in a work of beneficence, the more extensively *diffused.* 2. The necessary quantum of *capital,* the more easy to *obtain.* 3. Pecuniary *benefit* the more extensively *diffused,* by bringing to light *small* hoards, hitherto barren, and enabling them to bear an interest. 4. *Frugality* promoted, by giving additional security as well as value to small savings. (See Book iii. Section 5, *Frugality assisted.*) 5. *Content* promoted, by giving, to the frugal among the self-maintaining poor, an interest in the economical maintenance and due employment of the burthensome poor. 6. *National quiet* promoted, by giving to some of the classes most disposed to turbulence, an interest in the prosperity of the proposed company, and of the government under which it acts—as the national debt gave to the public creditors an interest in supporting the title of King William.

† *Shares why determinate?*—Reasons. To avoid the perplexity that would attend the paying dividends of interest upon *fractional* sums. 2. To hold out to *frugality* a determinate mark to aim at. 3. To facilitate the allowance of *interest,* as between seller and buyer, according to the number of days elapsed since the payment of the last dividend, as in the case of *India bonds.*

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supra. 8. Obligation of *indemnifying* the rateable inhabitants against all further *increase of the poor rates*, during the existence of the company. 9. Obligation of sharing with the rateable inhabitants the half-yearly profits of the company, in a proportion to be fixed upon, by an abatement in the quantum of the poor rates for the succeeding half-year. See Section 9, *infra*. 10. Obligation of publishing, at weekly or other frequently recurring periods, complete statements and accounts, exhibiting the whole of the company's transactions, including a complete state of the pauper-population throughout South Britain, for the satisfaction of all parties concerned. (See Book ii. Ch. x. *Book-keeping*.) 11. Power with, or in some instances, without obligation, in regard to the applying the system of industry-houses, on the company's account in respect of profit and loss, to the several collateral purposes following; mostly for the benefit of the poor, and among them chiefly of the self-maintaining classes:* viz. 1. Employment register-offices and gazette—See Book iii. Ch. i. *Employment secured*. 2. Charitable loan offices—See Book iii. Ch. iv. *Temporary Indigence relieved*. 3. Frugality banks—See Book iii. Ch. v. *Frugality assisted*. 4. Superannuation-annuity banks—See ibid. 5. Widow-annuity banks—See ibid. 6. Post-obit-benefit banks—See ibid. 7. Charitable remittance office—See Book iii. Ch. vi. *Pecuniary Intercourse facilitated, &c.* 8. Frugality inns—See Book iii. Ch. vii. *Conveyance facilitated, &c.* 9. Frugality conveyance-houses—See ibid. 10. Delinquents' pass-houses, See ibid. 11. Poor debtors' pass-houses—See ibid. 12. Charitable dispensaries—See ibid. 13. Lying-in hospitals—See Book iii. Ch. xi. *Rate of Infant mortality reduced*. 14. Midwifery lecture-schools (for females)—See Book iii. Ch. xii. *Useful Knowledge augmented and disseminated*. 15. Veterinary or cattle-disease lecture schools—See ibid. 16. Militia exercise schools (for the male apprentices—See Book iii. Ch. x. *National force strengthened*. 17. Marine schools (for the apprentices in the maritime industry houses)—See ibid.——12. Obligation of providing indemnity for such interests, if any, of third persons, as may be affected by the change.—The weight of all this business, very inconsiderable, in respect to its pressure upon the intellectual faculties of the Board of Directors, in comparison with that which is sustained by the East India Direction. (See Book v. Ch. v. *Prospect of Success*.)

Section VIII. *Restraints*. 1. Precautions against the sudden acquisition of *votes*, to serve *electioneering*, *stock-jobbing*, or other sinister or temporary purposes, to the prejudice of the permanent duties or interests of the company—restraints grounded on the regulations made in this same view in the instance of the East India Company. (See *infra*, section 11. *Director's Oath*.) 2. Precautions against applying the capital to purposes of *speculation*: buying articles for the purpose of selling them at high profit, in the same shape, instead of consuming them, or working them up. (See ibid.) 3. Precautions against applying the capital to purposes of *monopoly*:—pouring into any particular channel of production so large a proportion of capital and stock of hands as to overstock the market, and by a *temporary* underselling ruin individual competitors. (See Book ii. Ch. iv. *Principles of Management—Principle of Self-supply*.) 1. Power *expressly* reserved to Parliament for limiting the quantum of stock infusible by the company into any such channel, either in the *whole* kingdom, or in this or that *part*. 2. Power to the King and Council to make *temporary* regulations in that view, with the consent of the Directors, and subject to the pleasure of Parliament—3. Or without consent, time being given them to be heard by counsel. 4. Precautions against *bubbles*: (viz. contrivances for giving the stock an apparent value, over and above the real, in the view of enabling those who are in the secret to sell out at a high price, to the defrauding of the purchaser.) 1. Dividend to be declared (say three months) before payable: 2. Power meantime to the King in Council to reduce it, stopping payment of the excess. 3. The company to be heard by counsel, without prejudice to the exercise of the power of stoppage in the meantime. 5. Declaration of dividend void, unless accompanied or preceded by a *publication of accounts*, according to a pre-established form: *i. e.* digested under pre-adjusted heads. These forms might be inserted in the act of parliament, or the charter of incorporation. (See Book ii. Ch. x. *Book-keeping*.) 6. Power to a committee of council to *examine* directors and all other persons, *upon oath*, touching the truth of the matters set forth in the accounts. 7. Directors, or their paymasters, paying dividends after notice to the contrary from the council-board, responsible as for embezzlement. 8. *Mandamus*, at the instance of the Attorney-General, or any individual, for *compelling*, on the part of the directors, the *performance* of any of the obligations with which they are charged: costs, by the party moving—by the directors out of the company's fund—or out of their own pockets—at discretion of the court.

Section IX. *Order of the Dividends*, or Disposal of the growing Receipts. 1. *Rent-dividend*—payment of the rents of lands taken on lease, as per Section 6. 2. *Bond-dividend*—payment of the interest of monies, if any, borrowed on bond. 3. *Maintenance* of the pauper-community 4. *Interest-dividend*—payment of common interest (five per cent.) to the stock-holders, upon the capital subscribed. 5. *Profit-dividend*—distribution of the profit, if any, made by the

* All these services might be rendered in each spot, in one and the same industry-house, and, (with very inconsiderable additions) by the same hands that compose the official establishment of the house.

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undertaking:—Branches of this dividend. 1. *Company's* profit-dividend (say forty per cent.) *Parishes'* profit-dividend (the remaining sixty per cent.)—Branches of the parishes' profit-dividend. 1. *Proportional easement* (thirty out of the sixty per cent.) accruing to the several parishes in proportion to their respective charges: 2. *Overburden*-easement, (the remaining thirty) applied exclusively to the benefit of the *overburdened* parishes, beginning with the heaviest burden* of all, and striking off the difference between that and the next heaviest, and so downwards; striking off, for example, the 6d. per pound from those who pay 18s. 6d. before anything is struck off from those who pay but 18s.—Standard rate, the *assessed* rate, not the *rack*-rent—to avoid disputes and murmurings. None can have much reason to complain, where all are gainers.

Section X. *Provision for existing Interests.*—1. Arrangement with the parishes and incorporated districts, who have already loaded themselves with the expense of buildings and stock. 2. Arrangement with the county and other *hospitals.* 3. Indemnification for persons enjoying lucrative situations in the management of the existing local establishments. Their experience a security for their being taken into the new establishment upon terms of increased advantage, the undeserving only excepted. The number of existing poor-houses upon a large scale much inferior to the number of the proposed industry-houses.

List of them, in form of a table, to be given in the work at large.

Section XI. *Director's Oath.*—Not vague and general, but pointed and particular:—serving as a check upon personal interest and affection, in regard to such points of duty, the infraction of which is least susceptible of being ascertained for the purposes of penal or coercive law—a guide to discretion, and a buckler against external solicitation. *Examples:* 1. Abjuration of personal interest, favour, and ill-will in the *choice of lands* for the subject-matter of the powers of purchase, compulsive, or uncompulsive. (See above, Section 6.) 5. Abjuration of *Electioneering, Speculation, Monopoly,* and *Bubbles.* (See above, Section 8.) 6. Promise to consult the *local attachments* of the pauper, as far as shall be compatible with the discipline of the establishment, in respect of the *place* at which he shall be maintained. (See Book iv. *Pauper Comforts.*) 7. Promise to execute, with unremitting vigilance, the coercive powers given for the suppression of *mendicity* and *habitual depredation.* (See above, Section 5, *Coercive Powers.*) 8. Promise to adhere, with unremitting strictness, to such of the *principles of economy* as constitute the main pillars of the system: unless in as far as any departure from them shall have received the sanction of Parliament. (See Book ii. Ch. iv. *Principles of Management.*)

* Instances have been produced, of rates as high as 19s. in the pound; but this (we may suppose) was not upon the rack-rents.

Book II. Plan of Management.

Chap. II.* *Separation and Aggregation.*—The task of *separation* incomplete, unless that of aggregation be combined with it. Purposes for which *Separation* may be necessary or useful—1. Preservation of *health* from infection. 2. Preservation of *morals* from corruption. 3. Preservation of decency. 4. Prevention of unsatisfiable *desires.* 5. Security (reciprocal) against annoyance, by bad smells, bad sights, noise, quarrels, scolding, &c. 6. Concealment (occasional) of the governed from the *censorial eye* of the governing class. 7. Security (particularly to the governing class) as against personal injury from the evil-disposed among the governed. 8. Distinctness in point of *education,* for *moral* purposes, and for the purpose of *experiment,* as between the *indigenous, quasi-indigenous, extraneous,* and *coming-and-going* stock of the *non-adult* class.—Purposes for which appropriate aggregation may be necessary or useful. 1. Matrimonial society. 2. Family society. 3. Nursing attendance. 4. Medical attendance. 5. Moral superintendence. 6. Instruction and direction of labour. 7. Intercommunity of work and labour. Modes and degrees of *separation*—as against *contact, smell, hearing, sight.* Means of *separation.* 1. In some cases separate *huts* or *cottages.* (See Ch. iii. *Buildings and Land,* and Book iv. Pauper Comforts.) 2. In general, in the common building, *form* of the building—divisions, separate and uncommunicating. (See the plate, and see Ch. iii. *Buildings and Land.*) 3. In out-door employments, mode of laying out the land. (See *ibid.*) 4. In spots that require to be occupied each by divers classes that require to be kept separated, separate *hours:* ex. gr. 1. *Baths:* one serving thus for both sexes. (See Ch. xii. *Pauper Education:* and Book iv. Pauper Comforts.) 2. Staircases, &c. 5. To *indicate* transgression,—conspicuous distinctions in dress. 6. Against *infection,* separation not merely as between *class* and class, but as between individual and individual.—*Infirmary*

* Chap. I. *Classes mustered,* is here omitted; room not being to be spared for it in an abstract thus compressed. The chief object of it is, to bring to view the several heads of inquiry, which a reader would expect to find touched upon, in relation to the several classes of hands that might naturally be looked for in the population of an Industry-house; with references to conduct him to the provision made in relation to each head, and enable him to satisfy himself whether anything be wanting, either in the list of cases, or in the provision made for them. Of the several Classes in question, a tabular view has already been given in "Annals of Agriculture," Vol. xxix. No. 167, (see Pauper Population Table,) which is supposed to lie before him. The heads may mostly be collected from the Table of Contents already given.

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huts, to serve when not so employed, as *Peculium* huts. (See Ch. iii. and Book iv. PAUPER COMFORTS.) 7. Against *corruption*, the corrupted and suspected separated from the unsuspected, and in some instances, from each other, as between class and class: *casual depredators*, especially those under twenty-one, to be kept separate from the *unavowed-employment* hands, who are *habitual depredators: unchaste* hands, from those of a *susceptible* age, of their own sex, as well as of the other: as between individual and individual, to serve as an obstacle to corruptive communication, appropriate aggregation, by intermixture of *Guardian Elders*, taken from classes rendered *corruption-proof* by *good character, infirmity, or age*. The Elders secure against annoyance —by the authority vested in them—by mutual support—(there being more than one in each *ward*) and by their being stationed, by the peculiar form of the building, generally within *view*, always within *call*, of the governing body in the centre of the building. (See the plate, and Ch. iii.)

8. For *decency*, separation as between sex and sex, at the usual times of repose, change of dress, &c.

9. For *prevention* of unsatisfiable *desires*— 1. Separation at meal times, as between those who have the homeliest fare, and those, who in consideration of habit or infirmity, are indulged with choicer fare. (See Ch. vi. *Diet.*) 2. Separation as between sex and sex, from the commencement of a certain age. 3. Separation of the *indigenous* and *quasi-indigenous* stock of the non-adult class, from the *coming-and-going* stock, who might excite hankerings after emancipation, by flattering pictures of the world at large.

10. For security against *annoyance*, 1. Separation as between the annoying and the susceptible classes. 2. Intermixture of guardian elders. 3. Near vicinity and general presence of the members of the governing body, with reference to the several classes of the governed —the result of the peculiar form of the building, as above. 4. *Infirmary Huts, moveable Watch-Houses*, and other *Peculium* huts and cottages, allotted to the classes rendered by *age* or past *prosperity* peculiarly susceptible of annoyance. 5. The *insane* consigned to a set of appropriate establishments. (See Ch. xi.)

Concealment (occasional) i. e. *security* from *observation—circumferential* screens occasionally interposed between the governing body in the centre of the building, and the governed classes all round. (See Ch. iii.)

11. Security as against the violent and refractory among the governed classes.—1. Between the *central lodge*, (the proposed station of the governing body,) and the surrounding divisions occupied by the governed, an *annular area* interposed.—2. Intermixture of guardian elders with the dangerous classes, as before.

12. For distinctness in point of *education*, separation (as above) as between the non-adult and the adult, and, among the non-adult, as between the *apprentice* and the *coming-and-going* stock; and, among the apprentice-stock, as between the indigenous and the extraneous —coming in after a certain age.

13. For appropriate *care*, the insane in an establishment by themselves—or with distinct establishments for distinct classes. For appropriate care and education, the *deaf and dumb*, in a set of appropriate establishments; likewise the *non-adult* of those *born blind;* or, if in a common industry-house, collected into groups, large enough to afford, each of them, full employment to an appropriate tutor.

14. For the Union of *matrimonial society* with *decency, separation*, combined with appropriate *aggregation*. In the *bed stages* of the married ward, double cells each for a married couple, formed by high partitions, and alternating with cells of the same dimension, each holding four small children (feet to feet) of the innocent and unobserving age, say from two to four, five, or six, (see the plate annexed.)

15. For *exemption from annoyance* combined with *family society*, power of choosing an inmate, given to the occupant of each *peculium* abode.—(See Book iv. PAUPER COMFORTS.)

VICINITY—General principle with regard to arrangement, as between class and class, in point of *vicinity*. Next to every class, from which any inconvenience is to be apprehended, station a class unsusceptible of that inconvenience. Examples: 1. Next to raving *lunatics*, or persons of *profligate conversation*, place the *deaf and dumb*, if (included in the same establishment, and) separated as to sight. 2. Next to *prostitutes*, and other *loose women*, place the aged women. 3. Within view of the abodes of the *blind*, place melancholy and *silent* lunatics, or the shockingly *deformed*. 4. Next to each married couple (as before) place at bed-time a set of children under the age of observation. *Barrier-Ward*—a ward interposed for making the separation the more perfect between a ward occupied by a class considered as *noisome* or *dangerous*, and another considered as *susceptible:* classes that, for one or other of the above purposes, require separation as between class and class.

Annoyance, the great source of discomfort in the existing poor-houses—overbalancing the comfort from fare much superior to that of the independent state. This discomfort may to a certainty be banished altogether from the proposed industry-houses. (See Ch. iii. *Buildings and Land;* and Book iv. PAUPER COMFORTS.)

A separate establishment not necessary, as against moral corruption, since, in an industry-house of the proposed form, separation may, as to this or any other purpose, be as perfect in the same establishment, as between two establishments ever so widely distant.

Chap. III. *Buildings and Land*. Sect. I. Size, number, and distribution of the Industry-houses.—Number of paupers of all ages, at the opening of the institution, say five hundred

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thousand: at the end of twenty-one years, by the accumulation of the apprentice stock, five hundred thousand more, at which period the accumulation ceases: the *effluents* or *outgoers*, equalling the *influents* or *incomers*. (See Book v. Ch. i. *Population expected.*)—Number to a house two thousand—number of houses at the opening, say two hundred and fifty: at the twenty-one year's end, five hundred. Number of spots therefore to be marked out for industry-houses, five hundred: whereof at the outset two hundred and fifty full, two hundred and fifty vacant.—Average distance accordingly between house and house 10⅜ miles: viz. the side of the square, of which four contiguous houses occupy the angles. Distance of the remotest part of each industry-house district from the house, upon the supposition of an exact equality of distribution, 7½ miles: being the semi-diameter of a circle circumscribing that square.—Distances upon the supposition of two hundred and fifty houses, miles fifteen and 10⅜. *Reasons* of the above arrangement —The larger the houses the fewer; and the fewer, the farther asunder. But the fewer the better, especially on the score of expense, for the company; partly on account of there being the fewer, partly, (as will be seen,) on account of there being the larger: the more, however, the better for the paupers, and others resorting to the houses: partly because the distance is less between house and house, partly because it is the less between each house, and that part of the country which is at the greatest distance from any house. The *number* of the houses being given, the more *equal* the distribution of the spots the better, because the *maximum* of the distance between house and house is the less, as also between any part of the country and the nearest house.

Advantages from having the houses upon a *large* scale, and thence from having them *few*. 1. Saving in the article of *salaries*, in the instance of such *officers* of which there must be one to each house, be the house ever so small; yet not more than one, be the house ever so large—such as governor, matron, medical curator, chaplain, &c.* 2. Ditto, in regard to *subordinates*, where the whole of a man's time must be paid for, though there is business for no more than a part: the smaller the establishments, the oftener this loss may come to be repeated. 3. Saving in the article of building, in the instance of such apartments, of which there must be one for each of the *officers*.—Bedchamber at any rate, if no other. 4. Ditto in regard to such, of which there must be one, at any rate, for each *house*, viz. Inspector's Lodge or Officers' Common Room in the centre, Kitchen, Surgeon's Room, Chapel, &c. 5. Ditto in respect to a *walled yard* attached to the *strong* ward.† 6. Ditto in respect to *utensils* necessary to every house, but which need not be multiplied in proportion to the population of the houses: such as clocks, house-door lamps, ladders, &c. 7. Saving in the article of *vessels*, the proportion of matter to capacity diminishing as the vessels are enlarged; as in kitchen boilers. 8. Advantage in respect of the faculty of carrying the *division of labour* to the higher pitch, the greater the stock of hands. 9, 10. Advantages by making *purchases*, and saving *refuse* of all kinds on a large scale. 11. Advantage in respect of the security for good management, by attracting the greater share of *public notice* and attention: *e. gr.* on the part of *travellers*, *topographers*, &c. —See, as to all these points, the next Chapter —Book vi. Ch. i.—and *Pauper Systems compared*.

Advantages from having the houses as *near* to one another as may be:—I. To the *pauper* community. 1. The distance the less for the *sick* to walk, or be carried to the house. 2. So, for *all* classes, in visiting their friends in their *native* parishes, or other places of *prior* residence, within the district. 3. So, for *out-of-employ* hands to go to the house for employment. II.—To the *self-maintaining* poor—The less time and labour consumed in making use of the nearest house, in its several qualities of, 1. Employment-Register-Office. 2. Charitable Loan Office. 3. Frugality Bank. 4. Superannuation Annuity Bank. 5. Widow Annuity Bank. 6. Charitable Remittance Office. 7. Frugality Inn. 8. Frugal Conveyance Stage. 9. And in visiting friends and relatives in the *house*. 10. Stages likewise the shorter, as between house and house, in the character of frugality inns and frugal conveyance houses on long journies. III.—To the *Company*, in respect of journies for transferring the *transferable* part of the stock of hands to situations where *provision* is *cheap*, or the demand for *labour* in general, or for a particular species of labour, *high*. IV.—In the character of *Poor Debtors'* Pass Houses, and *Delinquents'* Pass Houses, to the public at large.

The thing to be desired is, that between *house* and *house* the distance shall not be greater than a man, or even a woman, of the labouring class can conveniently travel on foot without *baiting*: nor, from *any* place to the *nearest* industry house, so great but that he or she may travel to and fro in the course of the day without *sleeping*.

Section II. *Plan of an Industry House, with its Appurtenances.*—Points to be attended to on this occasion. I. Health; depending on, 1. Freedom from *damp*. 2. Facility of *ventilation*. 3. Security against the spread of *infection*—thence occasional faculty of separation. II. Comfort; depending on, 4. Exemption from excessive *cold*. 5.—*Heat*. 6.—*Bad smells*. 7.—*Noise*. 8.—*Observation* of superiors, when not necessary. III. Industry; depending (as far as the building is concerned) on, 9.—*Size*. 10.—*Form*. 11.—*Dimensions*;

* For an exemplification by calculations, see the note at the end of this chapter.

† See the note at the end of this chapter.

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—and 12. *Lightsomeness* of the whole building, and of each apartment, according to the nature of the business carried on in it. 13. *Compactness*, i. e. distance between apartment and apartment throughout—the shorter the better—as well for the purpose of work, as for the purpose of *book-keeping*, (in which is included the keeping account of work;) and that the whole establishment may be surveyed by the principal manager, and orders given, and answers received by him, from *every* part of it *without change of place*, IV. MORALITY; in as far as depends upon, V. DISCIPLINE: for the perfection of which there should be, 14. Universal *transparency*. 15. Simultaneous *inspectability* at all proper times. 16. On the part of the inspectors, the faculty of being visible or *invisible* at pleasure. 17. On the part of the building, faculty of affording *separation*, as between class and class, to the extent of the demand, as detailed in the last chapter. 18. Means of *safe custody*, in relation to the *dangerous* and other *disreputable* classes. 19. Subserviency to the purpose of preventing intrusion of *prohibited company*. 20. Giving *warning* of the approach of apprehended intruders. 21. Preventing the introduction of *prohibited articles*—such as spirituous liquors, gunpowder, arms, &c. VI. *Reception and Accommodation of* VISITERS. VII. *Safety against* FIRE. VIII. *Subserviency to the Exercise of* DEVOTION. IX. ECONOMY. *Expense* as small as possible in comparison to *use:* degree of use being measured by degree of subserviency to the several purposes above-mentioned.

All the above points provided for, and the principal of them to a degree of absolute perfection, by a plan of architecture, governed by a new and simple principle—the *central inspection* principle. General form, *circular;* or, for cheapness, circularly *poligonal*—say in twelve sides or cants, each constituting a *division* of the building: each division divided in height into five stories, viz. two *long* or *whole* floors, alternating with two *short* or *narrow* floors, and a *gallery* above, divided into six *stages*, rising one above another.—*Ward*, the name of an *occasional* division, adjusted in its dimensions to the population of the *class* to which it is allotted. The *governed*, (the paupers of all ages and classes) occupying the several divisions at the circumference; the *governors*, (the officers,) the central part, termed the *Lodge*, or *Inspection Lodge*. (See the plate annexed.) Any part capable of being withdrawn from inspection at any time, for comfort, decency, &c., by circumferential screens, parallel to the *outer* front of the division, and up to the height to which it reaches, closing the *inner* front.

At the time of divine service, a *stage*, on which are placed the *pulpit*, *reading-desk*, *clerk's desk*, and *communion table*, lets down through the ceiling upon the floor of the lodge. Balanced by counterpoises all round, a moderate force is sufficient to raise or lower it. The under surface of the stage, in form of a flattish dome, constitutes, as far as it extends, the ceiling of the lodge. The descent of this dome discloses a set of circular seats above, serving as a *gallery* for chapel visiters. The pauper congregation are ranged, at the inner front of their several divisions, on a set of forms, backed by the circumferential screens, which keep the implements of work out of sight. An interval of two feet all round, above the top of the circumferential screens, serves for the admission of the light.

Means of Ventilation. 1. Between the *lodge* and the *divisions* all round, an *annular well* covered by an opening sky-light, and clear from top to bottom, except in as far as occupied by the staircase, and the two stories of landing-place or gallery all round, for communication between the staircase and the several divisions. This well will maintain a draught of air from the several stories of windows all round (five in number) whenever they are open, as a chimney does from a door. 2. Chains of *ventilation tubes*, running from the bottom to the top of each division.—Conceive a square tube, (like that used for conducting rain water from the top to the bottom of a house,) running through the building, at bottom piercing the floor of the lowest level or ground story, at top piercing the roof. On the ground story, conceive a few inches of this tube cut away, from the ceiling downward. This discontinuance will give room for that part of the air injured by respiration, which being the lightest, tends to occupy the top of the room, (viz. the *azote*) to escape through the ceiling, at the part where the tube recommences: and (the height at which the tube opens being so much above the height of a man standing in the room) will not incommode any of the inhabitants by the blast. An equal part, and no more, is cut away, in like manner, in the room immediately above; where, for the reason just given, the foul air issuing from the room below will not be breathed over again by the inhabitants of the upper room; not being discharged into it, but at a height considerably above that of their mouths. Another chain, the converse of the above, for carrying off the heavy part of the foul air, (viz. the *carbonic acid;*) the interruptions being in this case towards the floor, instead of being towards the ceiling, as in the former case.

One division, allotted for officers' private apartments, is exhibited in the draught: five *whole* floors, as in an ordinary house. Out of the interior part of it is taken the *only staircase:* out of the annular well, the *galleries* forming the *communication* between the apartments and the staircase. In the central part, the lowest floor a little lower than in the circumferential, for the sake of getting two floors of *store-room* under the lodge.

The height of the central lodge being, according to the plan, fourteen feet, and capable of being increased, a *gallery* (not exhibited in the draught) extending all round to a breadth

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limited by the circumference of the dome, would on week days afford a commodious station for any number of *clerks*, and on Sundays would add to the accommodation of *chapel visiters*. Should any deficiency of light be perceived in the lodge, a supply might be obtained by lining the interior boundary of the gallery on the outside here and there with pieces of looking-glass, by which the light, coming through the windows of the upper or gallery floor of the divisions all around, might be reflected down into such parts of the lodge as it would not otherwise reach; and by the same means some parts of the *upper floor* or gallery all around might be rendered visible to some parts of the lodge, to which they would not present any direct view.—Means whereby the lodge, notwithstanding the centrality of its situation, might at all times be subjected to any degree of ventilation that would be required.—Two hollow *trunks*, leading from the outside of the building, through the *radial* passage, one on each side the door-way, forming each of them at its surface a seat, skirting the passage the whole of its length. Entering the *lodge*, one on each side of the door, they terminate each in a hollow pilaster; from this pilaster the air may be discharged either at a height approaching that of the ceiling (as in the chain of ventilation-tubes for the apartments in the circumference) or at any lesser elevation, by means of apertures opening or closing at pleasure. Continued up through the *chapel-visiters' gallery*, they would afford ventilation to that part. In general a sufficient current would be kept up by difference of *temperature*: but in a hot season, and a stagnant atmosphere, the current might be accelerated or produced by the action of any one of a variety of *machines*, too well known to need any description here.

The same room for all purposes—work, meal, and sleep. Lodging is thus afforded with scarce any addition to the expense.*—Accommodation for *sleeping*.—I. Single Bed-places; *i. e.* places for single persons of all ages, from about six years old upwards. (See the plate.)—A range of *bed-stages*, or frames, in a line, running along each of the side-walls of each room, as shown in the ground plan; the head towards the wall. Each bed-stage six feet in width, and from six feet and a half to five feet and a half in length: the longest where the room is broadest; some holding three persons, others four, with a partition between every two persons: height at the head, the width of two boards; (a little less than two feet) sloping down to the breadth of one board at the feet; (a little less than one foot.) Room in width for each person—in a stage holding three, twenty-four inches;—in a stage holding four, eighteen inches: (seamen have but fourteen.) Each bed-stage, being furnished (as in the plate) with a *counterpoise* at two or each of the four corners, might draw up to the ceiling in the day-time, to leave the space below clear. But if *reversed*, it would form a *table* for working at, or any other purpose; the extra-depth, which would be in the way of the knees, being got rid of, by doubling up on hinges: by means of a few cords remaining constantly attached, the beds and bedding would pack up within the frame: the *stand*, composed of two *horses* crossing one another, and turning round a common upright (the horizontal section of it being represented by an X) would be nearly flat when the legs of X were brought close, for the purpose of stowing the stand away at bed-time, when not thus employed. The *partitions* furnished with proper stands, might form each of them a *bench* to sit upon at table; or two together might form a narrow table. Various means of adapting the articles in question to these changes may be conceived; the particularizing them would require more room than can be spared. II. Double or married Bed-stages. (See the plate.) Each four feet in width, bounded by a moveable partition or screen on each side, six feet and a half high.—Alternating with these *married* bed stages, sets of *children's* bed stages, for children of an innocent and unobserving age:—say from two to six years: each for two rows of children, lying feet to feet: breadth, in some, for two children in a row, in others, for three. In the two opposite ranges, in the same room, the alternation should be so managed, as that each couple should have for its opposite neighbours—not another married couple—but a set of children. In the day-time, these high partitions serve for the circumferential screens, employed as above at chapel-times, and at other times (still in the same circumferential situation) as *anti-inspection* screens, in vacation hours.—When not in use, they stow away in the *radial* direction, close and parallel to the *radial* walls.—For the sets of *cribs for infants*, see the plate, and see Ch. ix. *Child-nursing*.

Infirmary. Persons labouring under infirmities neither noisome nor contagious, are lodged in the uppermost or gallery floor: a person labouring under an infirmity either noisome or contagious, occupies to himself an *infirmary hut*. Description of an infirmary hut. A cube of seven or eight feet. Width of the door, three feet: width of the bed, three or four feet; space on the other side of the bed, one foot. The door close-fitted and well listed:

* Systems which afford work alone, or work and diet without lodging, exclude from relief those whose homes are too far distant, and the *homeless* classes, whose need of relief is the most urgent. Want of a *home* is the result of extreme poverty in any of the classes: but there are some to which it is *essential*, others to which it is more particularly incident.—Examples.—1. Children deserted by both parents. 2. Orphans (fatherless and motherless.) 3. Foundlings. 4. Bastards. 5. Strange hands. 6. Stigmatized hands. 7. Suspected hands. 8. Unavowed employment hands. 9. Beggars. 10. Unchaste hands. 11. Disbanded hands.

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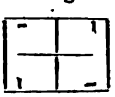
particularly at the side by which it hangs on the door-case. As the door opens, it forms a screen to the head of the patient, defending him against the blast. On the inside, a thin board, as long as the door is wide, fastened to the top of it, making with the plane of the door an angle greater than a right angle, for the purpose of directing up towards the ceiling such of the air as, at the opening of the door, comes in above. To weaken the reverberation of the blast, opposite the door, an oval hole, closed by a well-fitted and listed shutter, playing loosely on a pin on which it is hung, and loaded a little at the bottom, that it may the more effectually overcome the friction, and replace itself in a position exactly vertical;—the fresh air, as it comes in at the door, pushes before it, and pushes out at the aperture, a part of the air which it finds in the room, and which, were it not for the vent thus given to it, would reverberate upon the bed. On the right hand of the patient, as he lies in his bed, a small window, not opening, but closely caulked. The bedstead on feet, one foot and a half above the ground. On each side, and at the feet, a flap, running the whole length, and reaching to the ground, turning by hinges on the bedstead. For warmth, the flaps are turned up, and occupy a vertical position, enclosing the patient as it were in a box, and keeping the bed-clothes from being undesignedly thrown off: for coolness, they let down. The ceiling, instead of being flat, *coves* a little in two slopes, corresponding to those of the roof: at top they do not meet in an angle, but in a narrow plane, say a foot wide; in the middle of its length, an aperture, say about two feet in length, closed by a *slider*, to let out the foul air occasionally at the top, more or less frequently, according to the temperature. The convergescence of the roof, which may take place in two directions only, or in all four, enables the blast to sweep out the air the more clearly; there being no corners where it can lurk unexpelled. For *equality of temperature*, the outside covering *thatch:* unless any apprehension should be entertained of its harbouring infectious vapour, in which case *tiling* or *slating* must be employed instead. The door clogged by a *counterpoise*, to ensure the shutting of it, and to moderate and equalise the blast produced by opening it. In cold weather, to close it more effectually at bottom, a *roller* hanging loosely by the woollen cloth by which it is covered. When not occupied as an infirmary, each hut would make a comfortable abode for two persons, at bed and meal times. By putting four together, four walls out of the sixteen, or by putting together two, one wall out of the eight might be saved, as in this figure, in which the situation of the door is marked by the short line:—but, on the quadruple plan, the benefit of the vent for the blast of the door is sacrificed. In as far as noisomeness is the sole ground of sequestration (as in bad venereal cases) the *quadruple* plan may be as good as the *double* or *single;* and there seems no reason why the double plan, at least, should not be upon a par with the single, even in the most infectious fevers.*



Section III. Approach and out-lying Cottages.—The approach, an *avenue* bounded by parallel walls; each wall serving as a support or back to a *pent-house roof*, supported in front by slender posts, forming thus a sort of covered walk or *corridor*, tiled or thatched, paved with brick or stone, according to the country. The same wall forming one of the boundaries of a line of *out-lying huts* or *cottages*. The door of each cottage opening into the corridor: a small window, either at the top of the door, or in the wall opposite. Between door and door, a *bench* for the customers to the Industry-house, in its quality of *Employment-Intelligence-Office:* over the benches the series of *Employment-Gazettes* pasted against the wall. (See Book iii. Ch. i. *Employment secured.*) No cooking being to be performed in any of these huts, each consisting of but a single room, on a plan nearly similar to that of the *Infirmary Huts*, they might be warmed by a *flue* running through the line of them, as in *hot houses.*†

Uses of the Avenue. This the *only* approach—no introduction by stealth—neither ingress nor egress for any one without his being exposed to scrutiny, the whole length of the avenue. Occasional barrier across the avenue

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* Advantages from the transfer of the place of sick-relief, from an hospital on the common plan to a company's Industry house.—1. In contagious cases, *separate* huts as above. (See Aikin on Hospitals.)—2. In cases requiring confinement, *confinement* more effectually *ensured;* a point found to be attended with great difficulty in the government hospitals.—3. *Exercise* suitable to convalescents, (whether mere exercise, or in the way of profit-yielding employment,) facilitated by the stock and personal strength of the house.—4. *Airing*, in addition to exercise, facilitated by the same means.—5. Habits of *industry* thus maintained without relaxation.—6. *Saving*, (to the company,) by exclusion of cases of *pretended* sickness, and convalescence purposely *protracted.*—*Profit* by the work.

† Estimate of the expense per *hut*, on the above plans:

	seven-feet cube.			eight-feet cube.		
	£	s.	d.	£	s.	d.
1. On the single plan	8	14	0	11	5	0
2. On the double plan	7	15	0	10	1	0
3. On the quadruple plan - - -	6	16	0	8	17	0
4. On the running plan for the outlying cottages - -	6	16	0	8	17	0

Except the first and last in the line, which would be as on the double plan.

N. B. Chimney and fire-place are not included: the most advantageous mode of warming, for cases 1, 2, and 3, not having been determined on: but will be in Book v. Ch. ii. *Pecuniary Estimates.*

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at one or both ends, to keep out the promiscuous influx of the *employment-seeking hands.*

In the corridor, the bedridden and infant part of the population might receive air and exercise on a rainy Sunday, by being drawn on *droshkies* (a vehicle in use in Russia, consisting of a board mounted on wheels) by the stout part of the children of their own sex; the non-existence of windows towards the avenue, would preserve the ancient inhabitants of the cottages from being incommoded by the noise and promiscuous resort of the *Employment-seeking* hands: and if, on this or any other account, it were an object at any time to cut off such communication altogether, the access of those visiters might be confined to hours when the inhabitants of the cottages were at their employments in the house.

Section IV. *Means of Separation.* Uncommunicating floors in each division, three out of the five: each short floor communicating with the long floor immediately underneath it. Divisions, eleven out of the twelve: the twelfth being reserved for the officers: three, multiplied by eleven, gives thirty-three uncommunicating apartments. Three and thirty classes may thus be kept in a state of perfect and constant separation from each other, yet all of them constantly present to the officers in the lodge. Between whatever classes a separation is kept in the house, it must be equally kept up without the house: the *land* must, therefore, be separated into *wards*, as well as the house. Between class and class, the barriers will be constituted by *roads*, not to be crossed by either class, nor to be made use of as roads by both at the same time. Barrier against *strangers*, a double fence all round: the space between fence and fence a *belt* planted with wood. It may be termed the *sequestration belt.* The *land* divisions *radiating* in continuation of the house divisions: the house not far from the centre of the land, that the land divisions may be equal as well as the house divisions; or if one ward requires less land than another, the land division may, on that side, be so much the shorter, and the house so much the nearer to the extremity of the land.

Difficulty of framing the conception to an adequate comprehension of the central-inspection plan, and of the effects it would have upon the management.—If in a building on this plan, anything of disorder is supposed, it must be, because though in words, the adoption of it may have been admitted, the state of things that would be the necessary result of it, is not present to the mind. The disorder supposed is supposed to be out of sight, which in fact it never could be. From the want of this advantage, proceeds that anxiety, the intensity, and at the same time, the inefficacy, of which is apparent in every page of the rules and orders that one sees. "*Officers* frequently *to go into the wards*—frequently *to hear complaints*—*master* frequently *to go into every ward, and inspect the persons therein, on a particular day of the week especially*—Twice *a-week the matron to inspect every part of the house*—*Paupers to be kept clean*—*Officers* frequently *to take a view of them*—*Paupers to come down into the dining-hall to be mustered and employed*—*doors to be locked, that they may not* harbour *in the wards in the day time*—*Nurse-children* frequently *to be visited*—*once* a-month *at least*—*Apprentices* frequently *to be visited by the Messenger.*"—This, from the regulations of one of the first-rate Poor-Houses—All this an attempt—and that, probably, in a great degree, an unavailing one—to effect by great exertions, not a hundredth part of what on the central inspection plan would take place of itself, without a man's stirring from his chair.*

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* Rough calculations, to exemplify in a few of the simplest instances, the expensiveness of a set of industry-house establishments upon a *small* scale (that of the *Suffolk* industry-house taken for an example, as being an existing one) in comparison with a *large* scale, such as that proposed.—The proposed scale (two thousand to a house) may be set down as ten times the magnitude of the Suffolk scale: for A° 1792, 1780, and no more, was the number in the nine Suffolk houses, as per observation of Mr Ruggles. Had it been 1800, two hundred to a house.—Numbers they were built for, or might hold, 3495—almost double:—an excess, and thence an extra expense, not to have been dispensed with in a set of *unconnected* establishments, instituted and conducted by *independent* authorities, and maintained out of *independent* funds, since under such a system the overflowings of one house cannot be received into the vacancies of any other.

I. *Official Establishment.*

Pay on the two scales (salaries and board included) of four of the officers, of which upon each scale there must be one, though there need not be more than one upon either: viz. governor, governess or matron, chaplain, and surgeon. Suffolk salaries, as per information from the houses: board, where allowed, estimated by supposition, at 10s. 6d. a-week for males, and 7s. 6d. a-week for females. On the proposed plan, persons of superior talents and education being required, an augmented rate of salary is allowed on that account. Average of Suffolk yearly pay—Governor and matron (not given separate) £91, 16s. 9d.; chaplain, £32, 1s. 6d.; surgeon, £109, 9s.;—Total, £233, 7s. 3d. *Proposed* pay. Governor and governess or matron, £400; chaplain, £100; surgeon, (or rather medical curator,) £200; total £700.

	£	s.	d.
Amount of the four salaries, at Suffolk pay, on the Suffolk scale, for one house -	233	7	3
Amount of four salaries at *Suffolk pay* in the *Suffolk scale*, for the whole of South Britain, £233, 7s. 3d. by 2500, - -	583,406	5	0
Amount of ditto, at *Suffolk pay*, on the *proposed scale*, for ditto, £233, 7s. 3d. by 250, -	583,40	12	6
Possible saving, - - -	525,065	12	6
Amount of ditto, at the *proposed pay*, on the *proposed scale*,	175,000	0	0
Saving *proposed* - -	408,406	5	0

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Section V. *Means of extension.* *First* method —If the purpose, for which the extension is wanted, be such, as a floor of one of the divisions of the house will suffice for, apply it accordingly, giving a proportionable increase to the line of *avenue*, or *outlying cottages:* for, (per estimate,) when once provision has been made for the two thousand upon the *central inspection* plan, outlying cottages, at two lodgers to a cottage, may be built at an expense not greater per head than the expense of the main building. This plan of extension may be pursued, so long as there is an assurance of a correspondent number of inhabitants, so circumstanced, as that they can be made to do as much work in value, *out* of the main building as *in* it: being employed, for example, partly in out-door work, partly in such in-door and sedentary work, as they may be trusted with, and would be capable of doing, in such a confined and ill-lighted situation: to which may be added, such farther number for which room can be found in the main building at the in-door working times. The additional stock of comfort afforded by this method, will be no small recommendation to it.—*Second* method, by which an extension may be given to the main building to an unlimited amount, for any purposes in relation to which the benefit of the *central inspection* principle is not wanted:—Before, and parallel to, that division which fronts the avenue, add a *projecting front,* communicating with the main building by a narrow passage:—length of the passage, such as to save the division from having its light ma-

II. *Working and Airing Yards for Strong Wards.*

	£	s.	d.
Suppose on the Suffolk scale, a *square rood* (having for its side a length of 104 ft. 4 in.) to be necessary for such a purpose.—Amount of the walling for one house, as per estimate,	208	13	4
Amount of ditto, for South Britain, upon the *Suffolk scale,* £208, 13s. 4d. by 2500,	521,666	13	4
Amount of ditto, for ditto, upon the *proposed scale,* if the space were not increased, £208, 13s. 4d. by 250, - - -	52,166	13	4
Saving on this supposition,	469,500	0	0
Amount of ditto, for ditto, upon ditto, if the space were increased in proportion to the population of the house—*i. e.* multiplied by 10.—Walling for a square plot containing 10 roods, £660, by 250, - -	165,000	0	0
Saving on this supposition,	356,666	13	4
Amount of ditto, for ditto, upon ditto, if the space were to be increased in the proportion supposed to be necessary,—viz. doubled.—Walling for a square plot containing 2 roods, £295, 3s. 4d. by 250, - -	73,791	13	4
Saving *proposed,* - - -	447,875	0	0

III. *Industry Houses,* exclusive of the strong-ward yards.

Average expense per house, upon the Suffolk plan (as per information from the houses)—building alone, exclusive of fitting, furnishing, and stocking, at the low prices of those times,	4111	2	3
Expense of building for South Britain upon the *Suffolk plan and scale,* £4111, 2s. by 2500,	10,277,750	0	0
Expense per house, on the *proposed plan* and *scale,* as per annexed draughts, and the estimate thereon grounded (both by Samuel Bunce, Esq., Architect to his Majesty's naval works) the prices being the London prices, A° 1797,	9428	0	0
Expense of building for South Britain, upon the proposed plan and scale, £9428 by 250,	2,357,000	0	0
Saving on the *proposed plan and scale,* - - - -	7,920,750	0	0

In the estimate according to the proposed plan, are not included, 1. The infirmary huts. 2. The outlying cottages. 3. The sheds, that may be requisite for out-houses. 4. The descending and ascending stage of the chapel, and the benches above. But the main building holds considerably more than the 2000, exclusive of infirmary huts and cottages; and the amount of all these articles together would not equal the difference between the London prices of this time, and the Suffolk prices of those times, (See Book v. Ch. ii. *Pecuniary Estimates.*) Farming buildings do not belong to the account, there being nothing that can be called *farming* in the Suffolk establishments

Savings recapitulated.—

	£	s.	d.
1. Amount of annual salaries, &c., of four of the officers, the value put into the shape of principal money, at five per cent. to match with the two other articles,—£408,406, 5s. by 20, - - - - -	8,168,125	0	0
2. Working and airing yards, for strong wards, - -	447,875	0	0
3. Main buildings, - -	7,920,750	0	0
Total of saving on these three articles alone, - -	16,536,750	0	0

This is but a part of the difference in point of economy between the two systems; it is to be observed, however, that of what concerns the *building,* a very great part is the result of the peculiarity of the *plan,* not of the amplitude of the *scale.*

The average number of parishes to a Suffolk house being twenty-eight, *quere,* what would be the *total* saving upon the *proposed* system, in comparison with a system of *working-schools* for single parishes, 14,500 in number, with liberty, indeed, of uniting, but so as not to be so wide asunder, but that children of the lowest workable age may go home at bed-time, and at meal-times?

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terially obstructed by the projecting front: for which reason, so far at least as that division extends, the projection should consist of but one floor: the roof low, and if flat, so much the better.*

Chap. IV. PRINCIPLES OF MANAGEMENT.—Necessity of finding a name for each leading principle, for the purpose of reference.—The newspaper mode of naming parliamentary *bills*, a precedent, and an example of the use. To each *principle* corresponds a *rule*, given at length in the work at large, with the requisite limitations and explanations.

Section I. MANAGING HANDS—*Means:* 1. *Separation and Aggregation* principle. (See above, Ch. ii.) 2. Central *Inspection*, or *Inspection-architecture* principle. (See above, Ch. iii.) 3. *Ample Scale* principle—Push to the utmost the advantage derivable from the amplitude of the scale—For applications, see *infra*. 1. *Labour-division* principle.—2. Whole-*sale purchase* principle—*Refuse-employing* principle.—(And see *supra*, Ch. ii.) 4. *Management-selection* principle. Under each head of management, observe in what industry-house the management in relation to that head, is better than in the rest, and introduce it into the rest. 5. *Tabular-statement* principle. In each industry-house, reduce the system of book-keeping to the form of a table, inspectable at one view, and at each period, from the two hundred and fifty particular tables, form a general table. (See *infra*, Ch. x. *Book-keeping*.) The use of the *Tabular-statement* principle, is to facilitate the application of the *Management-selection* principle.—No close and persevering comparison, but when the objects are on the same surface of the same paper, or of divers papers ranged in the same plane. 6. *Uniform-management* principle. Keep up the same plan of management in all the industry-houses, in all points, which present no particular reasons for variation, as between house and house. Frame for this purpose at the outset, a set of *blank books* or *forms*, to be observed in all, improving them from time to time, according to the suggestions of experience. 7. *Local-consideration observing*, or *exception-observing* principle—a memento, not to push the principle of uniformity too far—so far as to keep the management the same in any two establishments, in regard to any point, in respect of which the influence of local circumstances requires a difference.

Section II. MANAGING HANDS—*Motives:* 1. *Duty and Interest* junction principle.—No means to be omitted that can contribute to strengthen the junction between *interest* and *duty*, in the instance of the person intrusted with the management:—*i. e.* to make it each man's *interest* to observe on every occasion that conduct which it is his *duty* to observe. Application of this principle to practice—All means of acting upon a man's interest, reduceable to the two heads of *punishment* and *reward*—Punishment, commonly so called, is out of the question here, being provided by the general dispensations of law—applications of reward are left mostly free in transactions between individual and individual. But money (including money's worth) is, in point of effect, the matter either of reward, or punishment, or of both at once, in so far as it lies in the power of one man to cause it to pass into, or to pass out of, the hands of another. A given mass of reward is the more *valuable* (because the more *certain*) where it attaches *of course* upon the conduct intended to be promoted, without the formality of legal investigation, directed expressly to that purpose. The duty of the manager of an industry-house has two main branches: duty towards those under his care, resolvable into *humanity*—and duty to his principals, (the company,) resolvable into *economy*. *Publicity*, the most effectual means of applying the force of moral motives, in a direction tending to strengthen the union between his interest and the *humane* branch of his duty; by bringing to light, and thus exposing to the censure of the law and of public opinion, or at any rate of public opinion, every instance of contravention. For enforcing *economy*, what is called *contract*, is the most efficacious species of arrangement, where the case admits of its being adopted:—the contractor standing to the *whole* loss (the apprehension of which operates like the *fear* of *punishment*) as well as to the whole profit, (the expectation of which operates like the *hope* of *reward*.)—Next to that, *partnership*; in which a man stands to only a *part* loss and *part* gain:—the union between interest and duty being of course the stronger, the larger a man's share: (regard being had to the sum-total of his property) especially since the larger a man's partnership share, the less the difference between the whole of any profit which he might make to himself in *fraud* of the partnership, and the share that would come to him

* What is still better than *facilitating* extension, is the reduction effected in the *demand* for extension, to the degree that has just been seen, by the substitution of the law of *universal* settlement to the law of *local* settlement. This depends on the distinction (already glanced at in the paper printed in No. 167 of the Annals, see above, p. 364) between the *transferable* and *untransferable* stock of hands. For a moderate and limited time (suppose a year or two) any persons may be considered as transferable to any part of the country, except persons beyond a certain age, who have never dwelt for a certain length of time together, in any place more than [ ] miles distant from the parishes in which they were born, or settled ever since [ ] years old.—I. Hands transferable without reserve—Children not above years old, being, 1. Deserted by their parents. 2. Orphans, fatherless and motherless. 3. Foundlings. 4. Bastards. 5. Insane hands.—II. Hands transferable with less difficulty than others, though not altogether without reserve.—1. Strange hands. 2. Stigmatized hands. 3. Unavowed-employment hands. 4. Suspected hands, (including children of stigmatized and unavowed-employment hands.) 5. Beggars. 6. Unchaste hands. 7. Disbanded hands. 8. Children of disbanded hands.

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fairly, *under* the partnership. Next to that, a share of profits, without any share of loss. Danger to be guarded against, where share of *profit* is confined to *particular* articles—temptation to increase, to the prejudice of the partnership, the amount of the partnership transactions in these articles—and so *per contra* in the case of *loss*. *Salary*, an expedient to be recurred to no otherwise than as far as *contract* or *partnership* are inapplicable. Salary, however large, affording no motive for the *habitual discharge* of the trust, much less for any extraordinary exertions in the view of discharging it to the best possible effect, but only for the *single* act of *undertaking* it, and thereby exposing one's self to the penalties appointed for *non-discharge* or *mis-discharge* of it.—General receipt for connecting a man's interest with his duty—Cause a *profit* to accrue to him of itself, on the taking place of the result proposed to be promoted—or a *loss*, or other prejudice, on the taking place of the result proposed to be averted. For instances of the application of this principle to the *working* and other *subordinate* hands, see the several principles of detail, exhibited further on, under the head of WORKING-HANDS—*Motives*.—For an instance of its application to the situation of the local manager in chief, (the governor,) or other persons bearing parts in the management, see the next principle.

9. *Life-Assurance*, or *Life-warranting* principle.—Give to every one, on whose care, in the instance of each child, the probability of its life in any degree depends, an interest, and that a pecuniary and never-ceasing interest—in the preservation of its life.—Application of this principle. That the service of an average child to twenty-one, possesses a clear value—reckoning even from birth—much more, from any more advanced period, is proved in another place. (See Book v. Ch. ii. *Pecuniary Estimates*.) By giving this service to the company, an interest in the wished-for result (viz. the preservation of life to the latest period)* is given to the company: an interest, from which flows the company's best and largest source of profit. It is therefore the company's interest to communicate a share of this interest to such of its several subordinates, on whose conduct the result in any way depends, in such shape and quantity, as shall in each instance be best adapted to the purpose.—Examples: 1. Establish it as a rule, that the governor, matron, medical curator, and female midwife, shall, each of them, pay head-money, for every woman who dies in child-bed. 2. Give to a certain part (the larger the better) of the emoluments of the governor, matron, medical curator, and nurses, the shape of head-money, payable for the survivors only of the *non-adults*, from year of age to year of age, either during the whole of the apprenticeship (viz. to twenty-one) or only during the age of extra-mortality. 3. Give in all like manner an *extra* premium or bounty to the governor, matron, medical curator, and nurses, of such of the industry-houses (in a certain number) in which the success of the management in this particular, shall, within a certain period, (say yearly,) have been most conspicuous.—The interest which a member of the community at large, has in the populousness of the community at large, is as nothing, in comparison with the interest thus created; viz. on the part of a member of the company, and still more on the part of an officer of a company's industry-house. This is the only shape which genuine and *efficient* humanity can take. The notion, which insists upon *disinterestedness* (i. e. the absence of the species of motive most to be depended upon) as an indispensable qualification, or even though it were but a recommendation, in the instance of a person bearing a part in the management of such a concern, is a notion respectable in its source, but the most prejudicial in its tendency of any that can be imagined—Every system of management which has disinterestedness, pretended or real, for its foundation, is rotten at the root, susceptible of a momentary prosperity at the outset, but sure to perish at the long run. That principle of action is most to be depended upon, whose influence is most powerful, most constant, most uniform, most lasting, and most general among mankind. Personal interest is that principle: a system of economy built on any other foundation, is built upon a quicksand.

10. Principle *of Publicity*, or *Transparent-management* principle. This regards *motives* as well as *means*. The more universally the particulars of the management are held up to view, the more universally the means of observing, and thence of adopting, whatever is good, and of observing, and thence of avoiding whatever is bad, are held up to view: and the stronger the force (because the greater the *certainty*) with which the motives derivable from the *popular* or *moral*, as well as those derivable from the *political* or *legal* sanction operate towards the insuring such adoption and avoidance. For the dependance of the degree of publicity on the amplitude of the scale, see *supra*, Ch. iii.

11. *Concourse-attraction* principle—a branch of the principle of publicity.—In the contrivance of the buildings, and the whole system of management, neglect no circumstance that can contribute to engage attention to the management, and attract to the spot a *concourse* of such visiters, whose remarks may afford instruction, and their scrutiny a spur to improvement, and a check to abuse. (See Ch. xii. *Pauper Education*—and Book iii. Ch. x. *National Force strengthened*.)

Section III. WORKING HANDS—*Employment:*

* For a gross sum once paid, new-born infants have been taken off the hands of parishes and individuals, by persons whose management has not been exposed to observation. This arrangement illustrates in the way of contrast that which is here recommended. A dead child neither tells tales, nor in any shape gives trouble to any body.

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12. *All-employing* principle. Reasons—Health, amusement, morality, (*i. e.* preservation from vice and mischief,) as well as economy. Not one in a hundred is absolutely incapable of all employment. Not the motion of a finger—not a step—not a wink—not a whisper—but might be turned to account in the way of profit in a system of such a magnitude. (See below, *Labour-division principle.*)—A bed-ridden person if he can see and converse, may be fit for inspection; or though blind, if he can sit up in the bed, may knit, spin, &c. &c. Real inability is *relative* only—*i. e.* with reference to this or that species of employment, or this or that situation.—In the situation in question employment may be afforded to every *fragment* of ability, however minute. On the part of the deaf and dumb, and the blind, the ability is *entire;* requiring only to be directed into particular *channels.* So, on the part of most classes of the *insane,* requiring only particular *means* for the *direction* of it.—In a limited local establishment on the present footing, the stock of ability lies oftentimes unemployed, for want of those appropriate means and opportunities of employment which could not be afforded to any profit in any other than an establishment on the largest scale.

13. *Employment-appropriation* principle.—Till the several classes of *confined hands* (*i. e.* who, by reason of infirmity, are susceptible of *particular* employments only, see Ch. viii. *Employment*) are provided, allot no such employment to *unconfined-ability-hands,* possessing a natural capacity for *every* employment. Husband the stock of *anybody's work employments,* reserving them for *confined-ability hands,* according to the nature of the case, and expending none of them upon *hands of all work.* Examples: 1. Allot not to *males* any employment exercisable by *females,* till the female stock of hands is fully provided: 2. Nor to adults, or children of a superior age, any employment exercisable by children of the lowest workable age, till the stock of hands of that lowest age is provided: 3. And so with regard to the *deaf* and *dumb,* the *blind,* the *lame,* &c.: 4. Nor to the willing, any employments to which the *earn-first* principle is applicable, without imputation or danger of inordinate severity, till the stock of *lazy* hands is provided with employments of that nature. (See *infra,* Section iv. *Earn-first principle.*) 5. Nor to *practised* hands any employments to which *unpractised* hands are competent, till the stock of unpractised hands is provided in like manner.* *Any-body's work* employments are such as may be carried on by unpractised hands: *imperfect-hand* employments, though capable of being carried on by imperfect hands, may require practice.

14. *Labour-division* principle. In the choice and allotment of employments, remember to improve to the utmost the room afforded by the largeness of the scale for the division of labour. Besides the saving of time, in respect of the passing from employment to employment, and from place to place, the more operations a process is divided into, the more simple the several operations: and the more simple an operation, the better the chance it has of being brought within the competence of the different classes of *confined-ability* hands, as just described.—Thence, 1. Time saved. 2. Relative ability increased. 3. Quantity of the scarcest sorts of employment increased.—The extent of the advantage derivable from this principle has no other limit than what is set by the expense of conveyance, viz. the expense of conveying the stock of raw, or less elaborated materials, to the spot where the stock of hands is accumulated; and from thence, in a finished or more elaborated shape, to the field of consumption or demand.

15. *Employment-changing,* or *several-trade* principle.—Classes of employments proper in divers points of view, to be assigned interchangeably to the same hand: 1. For health and gain of working time, one laborious, another sedentary or unlaborious. 2. For health and equal development of strength, (See Ch. xii. *Pauper Education,*) one *stationary,* (which may yet be laborious,) one *ambulatory.* 3. For gain of working time, one *out-door,* or *fair-weather* employment; one *in-door,* or *all-weather* employment. 4. For saleable profit to the Company—to the *public,* despatch, and saving of expense—one *low* but *certain-profit* employment for a *peace* employment; *ex. gr.* improvement of land:—one *high* though *temporary profit* employment, for a *war* employment; *ex. gr.* ship-building, and the trades connected with it. In the instance of the female branch of the unripe stock of hands, by way of preparation for matrimony, or private service, the circle of *family* employments alternating with the manufacturing, agricultural, and other profit-yielding *community* employments of the house. Examples: Child-tending, sick-tending, cooking, washing, making, mending. Inattention to this point among the existing community-establishments.

16. Principle of *self*-supply.—In the whole stock requisite for the maintenance of the establishment, there will be few, if any, sorts of articles—even raw materials included, as well as workmanship—that might not be produced by the working strength of the establishment:—if it be sufficient in quantity the whole expense of the present poor rates might thus be saved. Advantages: Value in the way of *use,* not susceptible, like value in the way of *exchange* of being destroyed or reduced by glut, competition, stagnation, change of fashion, war, or other causes; nor by imperfections in workmanship affecting *appearance* rather than use:—imperfections particularly congenial to such unpractised and feeble hands.—Under the

* In the work at large, lists of *any-body's work* employments, and *imperfect-hand* employments, will be endeavoured to be made out.

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principle of self-supply, neither *market*, i. e. *demand*, nor capacity of production, are exposed to failure.—Each hand working, for the most part, not only for the establishment of which he is a member, but, in some degree, individually for himself, natural justice holds out its sanction to this arrangement, sympathy helps to promote it, and self-advantage to sweeten it.—Acknowledged community of interest will enable the willing to spur the lazy, without exposing themselves to the reproach of officiousness or ill-nature.—Working for sale would, unless laid under restraints by superior authority, expose individual competitors to universal ruin: self-supply injures nobody—affords ground of complaint to nobody. In the case of an individual, indeed, the principle of self-supply is repugnant to good economy, and is the forced resource of a nation little advanced in the career of opulence: for in that case, in as far as the application of the principle of self-supply extends, the benefit of the labour-division principle is foregone. But in this vast populous establishment, affording within itself the means of carrying the division of labour—not only to the ordinary pitch, but beyond it,—the two principles act in conjunction, and the operation of each is favoured by the assistance it receives from the other.

Section IV. Working Hands—*Motives: End* view,—the extraction of labour to as great a value as may be, consistently with the regard due to health, customary relaxation, and the observance of religious duties. N. B.—The principles exhibited in this section, as subservient to that end, are but so many applications of the *Duty and Interest-junction* principle.

17. *Self-liberation* principle. No relief but upon the terms of coming into the *house*, (*i. e.* an industry house,) and working out the expense;—till then no enlargement.

18. *Earn-first* principle.—When ability adequate to the task is certain, and laziness apprehended, no meal given, till the task by which it is earned has been *first* performed. The *self-liberation* principle is sufficient, without the *earn-first* principle, in the instance of *adequate ability hands:* such alone excepted, if any such there be, who would prefer idleness and confinement to industry and liberty. For these the addition of the *earn-first* principle would be necessary; but principally to those who, though habitually able to earn more or less *towards* their maintenance, are not able to earn the *whole* of it. Without this, or some severer and less unexceptionable spur, the lazy among them would do nothing. As to those who come within the operation of the *self-liberation* principle, whether a man works more or less, makes no difference to the Company: the better he works, the sooner he is out: the less he works, the longer he stays. So far as the operation of this principle extends, the Company need never be a loser, but may be a gainer if it pleases: utmost expense of maintenance per head per day, of an able-bodied male, not so much as 4d. average value of the lowest paid species of labour, not so little as 1s. Humanity, however, will not be the only check upon the abuse of rating the value of the relief too high, or, what comes to the same thing, the value of the work performed, too low: since, the worse terms the Company afford to *self-liberation* hands, the fewer they will have; the better the more. It is only by the combination of the *self-liberation* principle with the *earn-first* principle, applied, the one or the other, according to circumstances, that *voluntary* charity is reconcileable with *industry*, or *compulsory* charity with *justice*. Employment for *lazy* hands, (to be administered upon the *earn-first* principle,) should be —1. Certainly performable. 2. Exactly measurable: *ex. gr.* turning of a wheel for grinding, &c.—or for raising water—so many *turns* made, so much work done.—To husband this sort of work, give a new hand the option between a greater quantity of this sort of work, and a less quantity of a sort which is more wanted, but, in respect to which the quantity, or the relative ability of the workman, is less free from dispute: *ex. gr.* digging, wheeling away, carting, hedging, gathering, chaff-cutting, weaving, picking, sorting, &c.

19. *Piece-work*, or *proportionable-pay* principle.—The application of it seems confined to three cases: 1. That of the *relative extra-ability* hands among the permanent stock: *i. e.* those who, though not capable of earning a full maintenance elsewhere, are capable of earning more than a maintenance in this establishment—the Company keeping up a fund of employment, such as is not to be had elsewhere, and affording maintenance cheaper than it can be had elsewhere. 2. Among these may be reckoned the *extra-ability* part of the *apprentice* stock; who cannot earn a maintenance elsewhere, because they are not yet permitted to *go* elsewhere. 3. The case of *encouragement-money* given out of earnings. If a man cannot be maintained in the establishment for less than 3d. and he cannot, in the way of piece-work, earn more than 2½d. nothing is to be got by the Company by paying him the whole of his earnings, and making him pay for his board, instead of finding him in board, and working him upon the *earn-first* principle.—Caution necessary in the application of the *piece-work* principle, where badness of quality may be masked—*ex. gr.* in those parts of a house or ship which are covered up—inside brick-work, caulking, &c.—or where despatch, under the spur of the reward, threatens to be productive of *bad workmanship* or *waste*. Caution in favour of *health*, especially in the case of the apprentice stock. Many, under the spur of the *piece-work* principle, injure their healths, and shorten their lives. But the mischief is probably owing, in a considerable degree, to fermented liquors: by the use of which such excessive exertions are commonly accompanied

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and supported, and which would have no place *here*.

20. *Peculiar-premium, prize-giving*, or *competition-excitement* principle.—Advantages: 1. By paying one or a few victors, you get the result of the extra-exertions of the whole multitude of competitors. 2. This combines well with the *piece-work* principle:—nor does either supersede the other; some being more taken with the certainty of a smaller reward, others with a chance of a larger one:—the degree of excitement, and thence of exertion, is thus rendered greater than it could be even by the *certainty* of a reward to the same amount, in a state of insulation.

21. *Honorary-reward* principle.—This is mostly an application of the *Peculiar-premium* principle, and the class of hands, to the circumstances of which it is more particularly applicable are, the *unripe* hands. In this shape, reward costs nothing.—Examples: 1. Superiority of *seat*, at table or elsewhere.* 2. *Precedence* in processions, or other public exhibitions. 3. Promotion to a *higher class* or form, *i. e.* to a form already occupied by children standing higher on the scale of acquirments, and mostly of a higher age. 4. *Distinction* in *dress*, with or without addition for the purpose of *decoration*.—Query, which is the greatest? The *good* done by the exercise of useful exertion, or the *mischief* by the suffering produced by the ferment raised among the dissocial passions—disappointment, dejection, envy, jealousy, revenge.—The good is supposed to predominate considerably: but all possible care should be taken to reduce the mischief to its *minimum*.

22. *Separate-work* principle, or *performance-distinguishing* principle.—This is the basis of the foregoing principles: without this, neither punishment nor reward:—especially no punishment. Rules: 1. Where tasks can be separated, avoid *gang-work*. 2. Where gang-work is inevitable, the *smaller* the gang the better. 1. Because the fewer the workmen whose work is thus blended, the easier each man's share in the work may be distinguished. 2. Because, if a reward be given to the gang, the smaller the gang, the larger the share which each man's own exertion procures for him. N. B. If the gang be not large, by shifting the hands from gang to gang in the same work, the share contributed by each to the result of the joint-work, may be obtained separate. 3. Where the reward is divisible, to spur a *lazy* hand, join him with a willing one: viz. if the arrangement be temporary: for, if it be permanent, despair and resentment against injustice, will be apt to slacken the exertions of the industious hand, and reduce them to a level with those of his unindustrious partner. 4. In work for self-supply, allot to each individual what he has individually been concerned in producing: he will then be his own rewarder and his own punisher, according to the goodness or badness of his work. 5. Giving him the *last* choice, may, in some cases, be a means of bringing his workmanship to a uniform pitch of goodness. 6. In work for sale, the price fetched by the work of each gang, and if possible of each individual, should be noted, that the reward, if any, may be proportionate.

Section V. Working Hands—*Fare:* 23. *Suitable-fare* principle.—Charity-maintenance—maintenance at the expense of others, should not be made more desirable than *self*-maintenance. Fare consequently the cheapest that can be found, so it be nourishing and wholesome—for, if there be any cheaper in use, it must be among the self-maintaining poor.—*Luxury*, being a relative term, is applicable with as much propriety to the diet of the poor as of the rich. Luxury, if it does *not* render the condition of the burdensome poor more desirable than that of the self-maintaining poor, fails of its purpose: if it *does*, it violates *justice*, as well as *economy*, and cuts up *industry* by the roots.—This extends not to any who may have earned, though it be in the establishment, more than the expense of their maintenance—since these are not *burdensome*, but *self-maintaining:*—nor to any extra comforts, purchased with any such *peculium* share of earnings, the allowance of which, is productive of a value more than equal to the expense, although the whole amount of a man's earnings should fall short of the whole expense of his maintenance. Example: Expense of maintenance, say 2s. a-week; ordinary earnings, 1s., if, by giving fifty per cent. encouragement-money for extra earnings, you can make him earn 1s. 6d. you save 3d.; and the 3d. he spends and costs over and above the 1s. does not go counter to the principle—although it should be clear that a self-maintainer of the same degree of ability *without doors*, would not earn above the 1s.

24. *Habit-respecting* principle.—This principle is the antagonist of, and a check upon, the former: its application is merely temporary, confined to the existing stock of *old-stagers*. How far, in consequence of habits of luxurious fare, contracted under the existing plan of poor-house provision, (how uncomfortable soever upon the whole,) the *Suitable-fare* principle should be departed from in the instance of that stock, is a problem for the humanity and discretion of the company to solve. (See Ch. vii. *Diet*.)

25. Principle of *Sobriety* or *No-fermented liquor* principle.—1. Fermented liquor, even of the weakest kind, is a drink not natural to the human frame. 2. In as far as it is fermented, it contributes nothing to health or nourishment. 3. In its abuse it is the most

* Employed at Westminister and other schools: boys of the same form taking place of each other each day, according to the success they have respectively had on that day in the species of competition called *challenging*.

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fertile of all sources of vice and misery.—4. No line can be drawn between the use and the abuse.—Some constitutions are kept in a state of perpetual intoxication by small beer. —5. Perfect health reigns where fermented liquors are excluded,—proved in the instance of the *Philadelphia* prison.

Section VI. Dead-Stock.—26. *Wholesale-purchase* principle.—27. *Refuse-employing* or *Save-all* principle.—These are but applications of the *ample-scale* principle. On a scale of such magnitude no species of refuse but has its value: all animal—all vegetable substances—if good for nothing else, are valuable as manure. (See the paper of the Board of Agriculture on manures.) But before their arrival at this state, many are the articles that may have gone through more stages than one in the scale of *degradation*. (See Ch. x. *Book-keeping*.)—28. *Use-multiplying* or *Several-use* principle.—An article being deemed necessary, observe whether it may not be rendered applicable to more uses than one.—Examples: 1. Each *room* serving for work, meals, sleep, and devotion: the consecrated part being let down from above at chapel-times.—2. *Married bed-stage partitions* serving for *circumferential privacy screens*.—3. Single ditto, serving for forms, working-tables, &c.—4. The bed-stages themselves all capable of serving for *tables*. (See Ch. vii.)—5. *Straw* for beds, employed first for *men*, and then for *cattle*.—6. The whole establishment applied to the several different purposes of a *poor-house*—an *hospital*—a house of *correction*—a *prison*—a *pawnbroking* establishment—a *bank* for the poor—an *inn* for the poor, &c. &c., without prejudice to any, and much to the advantage of many, of the objects in view.—For the application of this principle to *actions* as well as *things*, see Ch. xii. *Pauper Education*.

Section VII. Non-Adult Hands.—29. *Apprenticeship* principle.—No relief to a pauper within the latest age at which it is usual for a child to be bound apprentice, but on the terms of being bound to the company till full age. Advantages: 1. To the child instruction, intellectual, moral, and religious; inbred habits of systematical frugality—certain security from vice and criminality—certainty of employment during the apprenticeship, and ever afterwards—chance of promotion to rank and affluence. (See *infra, Indigenous-promotion* principle.) Condition, upon the whole, more than upon a par in point of happiness with that of an individual of the same age in the world at large. (See Book iv. *Pauper Comforts*.)—2. To the *Company*, and its copartners the *rateable parishioners*—a fund of increasing profit, at the end of twenty years, and ever afterwards, more than equal to the amount of the present poor-rates. (See Book v. Ch. ii. *Pecuniary Estimates*.)

30. *Talent-cultivation* principle.—Natural talents of any kind, manifesting themselves in an extraordinary degree to receive appropriate culture. Examples: Musical habits principally:—viz. an extraordinary fine voice, or an extraordinary good ear, and thence affection for the pursuit. (In the instance of a natural taste for the arts of *design*, or of strength or comeliness adapted to *dancing*, or other *theatrical exhibitions*, superiority is less manifest, culture is less exceptionable in the eyes of a severe moralist, and the object is of inferior account.)—Advantages: Comfort and consideration of this part of the pauper community increased.—Importance and desirableness of the condition of a Company's apprentice raised. For the importance of music, as an assistant to instruction, intellectual, moral, and religious, see Ch. xii. *Pauper Education*.

31. *Fellow-instruction* principle;—a branch of the *Indigenous-promotion* principle.—The children themselves to be employed in the instruction of their *fellows*; the more advanced, in the instruction of the less advanced:—as much of the instruction as possible to be given upon this plan—in time the whole of it may.—Advantages: 1. Saving in the *expense* of superior instruction. 2. On the part of the *pupils*, *comfort* increased: the impression of awe, and idea of coercion being in great measure removed. 3. *Progress accelerated*—the alacrity being increased, and the analogy of ideas betwixt teacher and pupil closer. 4. On the part of the *teacher*.—Comfort increased, in respect of the pleasures of superiority and command. 5. Progress accelerated: the knowledge acquired by *teaching* being much more perfect than what can be acquired by simple *learning*: in the one case the mind being in good measure *passive*—in the other completely *active*. To the cultivated mind of a master, the task of perpetually dwelling on ideas of no higher rank than those which are upon a level with the capacities of children, is a wearisome and fastidious task. In the case of the *pupil-instructor*, the task which he has but just ceased to learn, in quality of pupil, is some time before it has lost its relative importance in his conception in his new quality of tutor; and when it has, it is exchanged for a higher. 6. Preparation for the application of the *indigenous-promotion* principle, by appointing the *quondam* apprentice to the higher offices of the establishment.

32. *Indigenous-promotion* principle.—From the time that the institution has been long enough on foot to have laid a suitable foundation in point of education, none of the officers (unless perhaps the chaplain) to be chosen elsewhere than out of the establishment, viz. out of the apprentice stock.—Advantages: I. To the Company's wards, hope, encouragement, and consideration. II. To the Company—1. Certainty of fitness, in respect of suitable education, character, experience, and probation—2. Saving in respect of expense of salaries. A given allowance, administered to persons whose habits of expense have been of the very lowest rank, will go proportionably farther,

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than if administered to an individual trained up in the profuse habits of the world at large.

Chap. V. Official Establishment. Section I. *Officers—Numbers and Functions*—the same in every Industry House.—1. Governor. 2. Chaplain. 3. Medical curator. 4. Schoolmaster, to act likewise as secretary. 5. Organist to act on Sundays as music-master, and* on weekdays as a clerk. 6. Governess, for the female part. 7. School-mistress, for the younger part of the female apprentices. 8. Matron, or head nurse, for the infant part—to act as midwife. 9. Husbandry bailiff. 10. Foreman and forewoman, at first, for the several employments. —Impossibility of determining with exactness, previously to experience, the exact number of officers requisite: two functions may be exercised by the same individual; or several individuals may be requisite for one function.

Section II. *Pay.*—In most instances, the greatest part of the emolument must wear the shape of a fixed salary from first to last: the value of the service actually rendered by each individual, not being capable of being exhibited in any such precise quantity, that the quantum of the reward shall be capable of being made to rise and fall with it. Governors must, at the outset, be in great measure, if not altogether, upon a salary: in process of time, as the expenses and returns of the establishment become ascertained and known, they may be paid upon the footing of *contract* or *partnership*. Till the apprentice stock has produced individuals ripe for this as well as the other offices, the emoluments being fixed, it might be sold by auction to candidates possessed of certain qualifications: power to the Company to revoke the appointment at any time on payment of the purchase-money. The *price* a man gives, will be a proof of the *degree* of his *inclination* for the *business* of the office; thence of his fitness, as far as depends upon inclination. The other exceptions regard the officers to whose functions the application of the *life-assurance* principle is extendible—the nurse receiving the whole of her emolument, and the medical curator a proportionable part of his, and so, perhaps, the governor and governess, in the shape of annuities on the lives of the apprentice-children under their care, up to a certain age. (See Ch. iv.)

Section III. *Powers and Restraints.*—Except as undermentioned, the authority of the governor to be absolute over the whole establishment; but no act to be done without the *privity* of the rest of the officers: each being rendered responsible for every act of the governor to which he does not enter his dissent; and the entry of each act being accompanied with a memorandum, stating what officers were present, and which, if any, absent at the time. Cases to be specified in which, to prevent any such mischief as would be irreparable, the *veto* of the chaplain or surgeon shall be sufficient to suspend the execution of any order of the governor, until there shall have been time for the pleasure of the Direction-Board to be made known.—Examples: 1. Danger to the security of the whole establishment by fire or water. —2. Danger to the *safe custody* of the apprentice stock, or stock of *self-liberation* hands; especially such as belong to any of the *dangerous* or *disreputable classes*. 3. Danger of communication of *infection*, or danger of *life* and *limb* to any individual in the establishment.—4. Danger of violation of the principle of *separation*, as between class and class.—5. Mischief, by the cutting down, destroying, or damaging *timber*, or other *trees*: the mischief in each case being such, as, were it not for the *veto*, might take place before the intimation of the pleasure of the Board could arrive. Contracts of *purchase, sale, hire*, and *loan*, such as are made in the local establishment, and not by the general Direction-Board, to be made *by* the governor, but with the *privity* of *all* the officers of both sexes. In cases that will admit of suspension, power to be reserved to the Direction-Board, to disallow any such contract within a limited time; these, like all other acts, being reported to the Board in weekly or daily course. No officer to be ever absent for a day together, without a *substitute* chosen by himself; but liable to be disallowed by the governor singly, or by any two other officers—the principal to be peculiarly responsible for the conduct of the substitute. The substitute to be, in the case of the chaplain, a minister in holy orders: in that of the *medical curator*, a person who has undergone such tests of capacity as shall have been established for the purpose. Power to each officer to take an *assistant* or assistants, upon the same terms as specified above, in regard to substitutes. Each officer will thus have the faculty—not indeed of *appointing* his successor, but of placing any one whom he is disposed to favour, in a situation which will *naturally* afford him an *advantage* in this respect. The power of nomination remaining in the Board, no detriment seems likely to ensue from such a privilege: the choice of a person, for whose conduct the chooser is personally responsible, affording as fair a presumption of fitness, as a choice made by an irresponsible member of the General Board. Each officer to be responsible to the Board, for every instance of misbehaviour, or proof of manifest incapacity, exhibited by any other, if within a certain time he does not give information thereof by minute in the books; taking care that a copy of the minute be transmitted to the Board. The plea of self-preservation will thus afford a shield against the imputation of officiousness and ill-nature. All the official acts to be exercised in the *common room*; viz. the central lodge.

Section IV. *Encouragements.*—Rich and honourable source of encouragement, were it the

* For the means of defraying the expense of the salary of the music-master without charge to the Company, see Ch. xii.

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pleasure of his Majesty to confer the honour of knighthood on a select number of such of the governors, as should have distinguished themselves in the humane, upright, intelligent, and dignified, exercise of their office:—also to bestow some of the church sinecures on some of the chaplains; but tenable only during their continuance in the exercise of that laborious and useful office.—Might not an arrangement of this sort help to protect the church establishment from obloquy?

The Company at the end of every year to present pieces of plate, in the way of premiums, to such of the officers of the two hundred and fifty houses—governors more particularly—as shall have distinguished themselves in their respective situations. The act of remuneration to be grounded, in every instance, on *specific*, and specified, exemplifications of merit, with reference to the evidence presenting itself in each instance, as apparent on the face of the books. A thousand or two a-year thus expended would go a good way, and probably produce ample repayment in the way of zeal and useful service.

Section V. *Visiters.*—All magistrates and clergymen, resident in the county, visiters *ex officio.* Power to inspect the books, especially the *complaint*-book; (See Ch. x. Book-keeping)—examine persons, and make minutes. The *power* might be coupled with an *obligation*, to be performed (suppose once a-year) in the instance of those resident within the pauper district, belonging to the industry-house. In the case of the ecclesiastical visiters, especially those resident at a distance, a small fee, fixed, or increased with the distance, might be a reasonable accompaniment to the obligation. The whole establishment, with its two thousand members, being inspectable, and every member of it examinable, sick or well, from a single station, (the centre lodge,) the time thus required to be bestowed will not be great.

Chap. VI. Diet.—Diet about two-thirds of the necessary *quantum* of expense.—Distinction between diet for the *new-comers*, and diet for the *old-stagers.**—*Necessity*, in respect of life and health, is the only standard in the former case; *habit* may prescribe an addition to the expense in the latter. (See p. 384, *Habit-respecting principle.*)—In the case of the new-comers,—*animal* food—meat—is the great source of expense—The greater part of mankind use animal and *vegetable* together; many, however, use vegetable only: *ex. gr.* the *Hindoos:*—some, animal only, viz. the *Esquimaux*, and other inhabitants of the regions too cold for vegetation—also some *Tartar* nations.—It is not clear that the latter are healthier or stronger than the former.—Whether a *mixture*, of animal food with vegetable, be more advantageous in point of health and strength, taken together, than vegetable alone, and if so, what proportion is most advantageous, is a matter of experiment in the highest degree interesting, never as yet tried, but which might be tried with the utmost advantage, in the proposed establishment, in the instance of the *indigenous* branch of the apprentice stock.—Bread is uneconomical—not only as being the result of an expensive manufacturing process, but as being considered as an *appendage* to *meat*, and thence impressing the idea of a *want* of meat. Bread and water, a penal diet in England, more expensive than the ordinary diet in Scotland.

I. Non-adults: especially the *Indigenous* and *Quasi-Indigenous* Classes.—Taking the cheapest food in point of *quality*, experiments should be made for ascertaining the most advantageous *quantity*. The *lowest* step in the scale, a quantity greater, in a known proportion, than the least quantity consumed by an average child of the same age among the husbandry part of the self-maintaining poor in Scotland—This ascertainable, with great precision, from the observations made by the Guardians of the Poor at Glasgow. The *highest* step, the quantity consumed by an average child of the same age, to whom as much is given as it will eat. Gradations to be marked out at equal intervals between these two points.—Difference to be tried between *two* meals a-day, and *three*—whether any, and how much, more is consumed at three than at two;—the *quality* the same,—*quantity* at option, as before:—and, if more is consumed, whether any, and what difference in point of *strength* or *health* be the result.—*One* a-day, and *four* a-day, hardly worth trying.—The two *sexes* to be compared to each other for this purpose, at the different *ages*.—Health being the mere *negation* of *disease*, if their be no disease in any instance, (which is the most probable, as well as the most desirable, result,) no indication in this respect will be afforded: in that case, as far as health is concerned, the *smallest* allowance is preferable, as being *least expensive.*—Difference between *general* strength, and *particular* or *local* strength. The human frame to be examined in this point of view—Some muscles stronger in some subjects, others in others—even where, in point of *general* strength, there may be no difference.—*Tests* of strength to be established—a single species of exertion, such as running, lifting, rowing, turning a wheel, &c.—each taken singly—is not of itself an adequate test of *general* strength, for all varieties in point of organization.—The proper tests for this purpose, are the exertions made in the several employments in actual use:—the experiment having by this means a direct application to *practical* use.—The effect of differences in point of *quantity* being ascertained, another class of experiments may regard the effect of differences in point of *quality*, i. e. *species* of food, each species taken apart; and another, of the effect of *mixtures.*

* Those who, upon the opening of the establishment, are transferred to it from the *existing* poor-houses.

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II. ADULTS—(*New-Comers.*)—A *fixed dietary* would be irreconcileable to economy; since the proportions in point of price, as between article and article, are subject to great and continual variation. So, likewise, a *fixed* allowance in *money;* since the same quantity of money will purchase as much again of any given species of food, or even of that which is cheapest at the time, at one time as at another: and, by an improvident application of a *limited* sum, famine might be produced.—The following course seems the proper one for the Direction Board to take. Give a list of *rations*, of different sorts—the more numerous, the better—all regarded as coming within the price proposed. Give to the governor of each house the option, as betwixt *these* several rations; allowing him even to employ, or at least to propose, *others:*—but on condition of their not exceeding a fixed price.

III. ADULTS.—*Old-Stagers.*—*Paupership* habit, is the habit principally to be considered in this case; the *original* habit, acquired during the *self-maintaining* state, having been more or less superseded by it. The paupership habit, instead of being *less* luxurious and expensive throughout, is, in the instance of those maintained in the way of *community*-maintenance (*i. e.* in poor-houses, howsoever denominated) invariably, and in an enormous degree, *more* luxurious and expensive.—Original habits are determined mostly by *professions*, though in some degree by territorial *situations:*—the agriculturalist, the lowest paid of all classes. In community-maintenance, the habit has generally been adjusted to the habits of the best-paid classes, though influenced more or less by territorial situation. Difference in this respect between *bread* countries and *meal* countries; and among bread countries, between *wheaten* bread countries and *inferior* bread countries—viz. rye, barley, oaten, and pease-bread countries. Meat is the great article of excess in the existing poor-houses.* Whatever degree of indulgence it may be thought fit, in consideration of acquired habits, to extend to the *old-stagers*, they should be dieted apart from the *new-comers.*—Briefly thus—*two tables*—*New comers'* table, and *old-stagers'* table. This to save the new-comers from the pains of regret and privation, and from the dissocial emotions and affections of envy and discontent.

Should any *retrenchment* be deemed advisable, *voluntary* charity will remain as a resource for the amount of the difference. (See Book iii. Ch. xiii. *Voluntary Charity assisted*—and Book iv. *Pauper Comforts.*)—*Fish* a contingent resource, in situations and seasons affording a *glut.*—Expectations entertained of a mode of *curing*, by which the benefit may be extended to all seasons and situations.—Conduct with regard to the mode of retrenchment.—1. Diminishing the *number* of meat-days.—2. Diminishing the *quantity* of meat on each day.—3. Diminishing partly the number of days, partly the quantity on each.—Saving by inferior *pieces*, a casual resource, depending on local situation:—the amount limited, since the *ratio* of inferior to superior cannot be increased. The distinction being principally the result of prejudice and caprice, differing widely as between country and country, any considerable increase in the relative demand would raise the price. In great towns, many parts, considered elsewhere as delicacies, and in vain coveted in country places, are degraded in saleable value, and even reprobated as unfit for man, by being denominated according to the demand made of them for the use of inferior animals. The principle of *self-supply*, though applied to this article, would not altogether supersede the distinction between superior and inferior pieces; since the superior, fresh or preserved, might be reserved for sale, and the inferior, in greater quantity, purchased with the price. This mode of retrenchment, a point of great delicacy: the settling of it, as far as can be done, by *resolutions*, conceived in *general* terms, a proper subject for the authority of Parliament. The execution ought not at any rate to be *sudden:* time should be allowed to the class in question to accommodate themselves to their new situation, and experience the benefit of it in *other* points of view.

Chap. VII. CLOTHING, BEDDING, &c.——I. CLOTHING.—Two points to be attended to—*frugality* and *distinction*—the latter, for the purpose of separation and aggregation—(See Chap. ii.)—*Frugality.*—1. Materials, the cheapest, so as to afford sufficient warmth. 2. Form, excluding all useless parts—such as skirts to coats and waistcoats—brims to hats—unless it be in the heat of summer, for protection against the sun; for which purpose straw would be preferable.—*Necessity* and *use* the standards—not *fashion*—though fashion has of late been approaching nearer and nearer to use.—*Distinction*, principally by colour—*form* being determined by frugality. In default of a sufficient number of cheap colours sufficiently contrasted, shreds of one colour, applied to a ground of another colour, might be employed.—*Shoes* with *wooden* soles, used in many country places, and even in London, under the name of *clogs*, Saving on this score alone, 3s. 6d. a head, in the instance of adults: about £40,000 or £50,000 a-year, in the whole.—In summer, no *stockings;* but the leg covered, or nearly so, by a prolongation of the breeches; which at that part may be repaired by piecing,

* Curious scale of fare compared with the qualities of the persons maintained—*Self-maintaining* poor, meat scarcely *one* day out of the seven—(Eden on the Poor *passim.*)—*Burdensome* poor, upon an average of seventy-seven houses, *four* days out of the seven. (Taken, on examination made in this view, from Eden.) *Convicts* of the worst species, and *enemies*, *seven* out of the seven. In the latter instance, *quality* advertised for, *the best*, and *quantity* excessive.

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more advantageously than stockings by darning. In winter, stockings might be added, or rather *hose: i. e.* stockings of woven cloth, as being more advantageously repairable.—At the parts most exposed to wear, viz. under the arm-pits, between the thighs, and at the elbows, linings, for strength, of shreds of *leather*—a species of frugality already in use.—For coverings of shoes, in place of, or in addition to leather, the materials of cast-off coats and waistcoats might be employed—or, for women's, gowns and petticoats—such as could not be applied with more advantage to other uses.

Soldiers wear *uniforms*, why not paupers?—those who save the country, why not those who are saved by it? Not the *permanent* hands only, but likewise the *coming-and-going* hands should wear the uniform while in the house, for order, distinction, and recognition, as well as for tidiness: being charged at a fixed rate per day; reserving to them the option with regard to shoes and stockings.

Clothing would be made, all of it, by the strength of the establishment, according to the principle of *self-supply:* but this would make no difference in point of *relative* cheapness and dearness, as between material and material; the quantity of *labour* requisite being the same, whether home-made, bought, or sold.—For the particulars, see Book v. Ch. ii. *Pecuniary Estimates.*

II. Bedding.—For the Bed-stages, see above, Chap. iv.—Bed, stuffed with straw:—one side covered with the cheapest linen or hempen cloth, for summer; the other, with coarse woollen for winter.—Stretching the under sheet on hooks, pins, or buttons, will save the quantity usually added for tucking in:—in cold weather, that the woollen may be in contact with the body, the sheet might be omitted. Rug, and two or three blankets:—upper sheet of no greater width than the cell, and tacked on to one of the blankets. Bed, one for the whole stage, or a separate one for each cell; and so the under sheet.—The advantages of separation are, superior portability; each bringing and stowing away his own bed without embarrassment or delay; and that in case of uncleanliness, the annoyance may be confined to the author of it. Straw, the more frequently changed the better, particularly in the warm months.—To the extent of the quantity wanted for littering cattle, the change will cost nothing; and beyond that quantity the expense will be only the difference between the value of the straw, as straw, and the value of it, as manure.

Chap. VIII. Employment.—The grand point is, to suit the nature of the employ to the nature of the hands.—The only difficulty is to find employment of a nature suited to the *unwilling* hands, and the *infra-ability* or *inadequate-ability* hands.* The quantum of this sort of employment requisite for the population (when complete) of each Industry-house, will of course depend upon the population of these two classes of hands. A stock of *easy*, or *any-body's-work* employment, having been found in a quantity adequate to the number of *difficulty-employed* hands, the difficulty is at an end. *Self-supply* is a principle particularly fruitful in *any-body's-work* employments.—In the agricultural branch, most of the operations being suitable to unexercised, many to feeble hands: in the clothing branch, most to feeble, many to unexercised hands. The stock of *every-man's-work* operations being increased more and more by the division of labour, (which in this scale of unexampled amplitude may be carried to an unexampled pitch,) the stock of work adapted to these *confined-ability* hands will receive a proportionable increase.

To afford the extra stock of labour suited to the extra demand in time of war, or preparation for war, each hand, exercising a war-trade, must be prevented from employing in it more than a certain part of his time (say three or two days out of the six) in peace: otherwise whatever accession to the national stock of *war-employment* hands were afforded by the Company's apprentice-stock of hands, would only drive out, or keep out, so many free hands; and there would be no more to spare of the sort of labour in question—no greater fund of capacity for that sort of labour lying by and unemployed *then*, than there is *now*. The advantage derivable from the *employment-mixing* principle, is peculiar, in great measure to such a company and its hands: since "*no man can serve two masters*," nor, in general, the same master-man carry on, without disadvantage, two or more unconnected trades.

Local advantages appurtenant to the situations of the several Industry-houses, may afford employments, to a value which in part might otherwise be lost; and those such as would be

* Those whose *natural* ability, with reference to labour, is decidedly below the necessary expense of their maintenance. This will include, 1, *Feeble* hands—as to a considerable part. 2, *Unripe* hands, up to a certain age—younger or older according to the management. 3, *Sick* hands—during the continuance of the sickness.—The unripe hands being capable of paying, with a profit, before maturity, and the sick after recovery, the feeble hands, together with such of the unripe and sick hands as die insolvent, (together with the few able hands that may chance to die in the same case,) are all that contribute at the long run to the *necessary* burden in point of expense. All others may be termed *adequate-ability* hands: most of whom will, of course, be *extra-ability* hands.

Confined-ability hands—those who may be able to do as *much* work as able hands in general;—only it must be of a certain *sort*—or preceded or accompanied by *instruction* or *attendance* of a certain sort, are—1, Insane hands (divers sorts.) 2, Imperfect hands. 3, Sick-and-well hands. 4, Tender hands. 5, Past-prosperity hands. 6, Of the dangerous and other disreputable classes, such as have been bred up, or confirmed, in habits of idleness or dissipation—but this only for a time.

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less apt than others to interfere with private trade. Examples: Stone-cutting—brick-making—mining—fishing, with the preliminary employments subservient to it—such as ship-building, sail-making, &c. The quantity of work performable in these *subservient* employments, might be confined to the supply of the Company's own demand.—No more vessels to be built, &c., than what the Company employs. In regard to husbandry-work for individual farmers, the Company might restrict itself, or be restricted, to rates regarded as excessive; say, all beyond double the ordinary rate,: the object being not to deprive self-maintaining hands of any employment, nor even of any such advantage as would be a reasonable compensation for casual want of work, and want of adequate pay in winter time—but only to get this or that work done, which might otherwise not be done at all—not being capable of being despatched in time, with all the labour that could be afforded by the obtainable stock of self-maintaining hands.

With regard to the pouring in hands into *over-paid* employments, whether in the view of taking the benefit of the excess, or (what would be the necessary consequence) for the purpose of reducing it, this advantage would be open to the Company, as well as to private masters, and private hands. The fund of information created by the *Employment-Intelligence-Office* plan, would be alike open to all parties interested. See Book iii. Ch. i. *Employment secured.*

In regard to the choice of employments, and the prudence of hazarding the necessary expense of such parts of the dead stock as might be requisite to a certain branch of industry, and could not, without loss, be transferred to any other branch, much will depend upon the *permanence* of the stock of hands capable of being allotted to any such employment: that is, in the instance of each hand, on the assurance of his continuance upon the establishment for a term not less than a certain time. The great and general uncertainty in relation to this head, is one of the most powerful and insuperable obstacles to productive economy in poor-houses, in the existing order of things.—(See Book v. Ch v. *Prospect of Success.*)—Hence an important division of the population of a proposed Industry-house, into—1. *Coming-and-going*, or *short-staying* stock of hands—2. *Longer-staying* stock—3. *Permanent*, or *standing* stock.*

Owing partly to the permanence of their situation, partly to their aptitude for receiving a suitable education, it is the labour of the stock of *unripe* hands, in their quality of *apprentices*, that would constitute the chief basis of the Company's profit-seeking arrangements.†

* I. *Short-staying*, or *coming-and-going* stock.—1, Sick hands. 2, Child-burdened hands. 3, Casual-stagnation hands. 4, Periodical-stagnation hands. 5, Out-of-place hands. 6, Disbanded hands. 7, Strange hands.—II. *Longer-staying* stock:—viz. as lying under difficulties, with regard to the obtaining of employment, over and above what exist in the preceding case.—1, Superseded hands. 2, Stigmatized hands. 3, Suspected hands. 4, Unavowed-employment hands. 5, Beggars. 6, Unchaste hands. —III. *Permanent* or *standing* stock: composed in one instance of those, who, by *positive* institution, are proposed to be fixed within the pale of the establishment for a long and determinate time; and as to the rest of such as, in virtue of their *natural* state and condition, are likely to remain for a time altogether undeterminate, and not likely to be of short continuance, and, in some instances, not likely to terminate but with life.—1, Unripe hands, or apprentice stock. 2, Among insane hands, all whose cases are looked upon as *incurable*. 3, Feeble hands. 4, Imperfect hands. 5, Sick-and-well hands (some sort). 6, Tender hands. 7, Past-prosperity hands.

† According to a calculation, in which the value of earnings was taken at a rate supposed to be too low, and the expense of maintenance, at a rate supposed to be too high, the neat value of the service of a male child, from birth up to twenty-one, after all deductions on the score of death and sickness, appeared to be £23, 3s. 5d. and a fraction, payable at birth;—increasing, of course, with each year of age, up to a sum amounting to £66, 12s. 5d. and a fraction, at the commencement of the eighth year of age:—from which period, on account of there being fewer and fewer years of *positive* value to come, it went on diminishing. In this calculation, there is nothing but what is perfectly consistent with the known and indisputable fact of the universal burdensomeness of children, in the existing order of things, in all ranks of life, and in particular among the self-maintaining poor. In the early stages of the period of non-age, a large proportion of the natural value, or capacity of yielding a clear profit, is lost, by lying unemployed, for want of time, opportunity, intelligence, and capital, on the part of the parents, to turn it to account: in the *latter* stages, by the dissipation of the produce by the minor himself, (rendered independent of his parents by the faculty of self-maintenance,) in the habitual purchase of luxuries, to an amount which is more than equal to that of necessaries; as is demonstrated by his being obliged and able to do without them, when, out of the same earnings, he has a wife and children to maintain, in the married state.—(See Book iii. Ch. ii, *Mendicity extirpated;* Book v. Ch. v. *Prospect of Success;* and Book iii. Ch. v. *Frugality assisted.*)—Under these circumstances, no wonder that the pecuniary value of a child, reckoning from the beginning to the conclusion of this period, should be generally regarded as *negative*, in this country; especially considering that it really is so—in a high degree, and without any exception—in the case of the superior and liberally-educated classes:—that is, in the experience of all who either write or speculate upon the subject.—For the particulars of profit and loss upon this part of the Company's stock, see Book v. Ch. ii. *Pecuniary Estimates:*—and, for the mode of taking account of it, see, in the meantime, the heads of a *Non-adult-Value-Table*, by the author, in ANNALS, No. 167, vol. xxix. (*supra*, p. 365.)—*To give a positive value to an average child*—is a problem, the solution of which would be an inexhaustible source of wealth, population, and happiness, to the state.—The proposed system bids fair to be—and it is the only one that, in the nature of things, could be—equal to the task.

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What the Company supplies itself with, will be gain to the Company, without being loss to other traders: since, whatever be the value that is thus produced by the Company, value to the same amount is saved out of the poor-rates. If the whole expense of the pauper community—say three millions—were thus defrayed by the labour of the pauper-community, and the Committee were but as trustees for the rateable inhabitants to the whole of the amount, the whole of the three millions would be saved to the rateable inhabitants, and they would have so much the more in their pockets, to lay out with individual traders of all sorts. Divided, as it is proposed to be, between the rateable inhabitants and the Company, the benefit to individual traders will be the same: the only difference being, that the part which is gained by the Company, will be laid out by and for the benefit of the members of the Company; while that part only which is divided amongst—that is, saved by—the rateable inhabitants, will be laid out by and for the benefit of the rateable inhabitants.

Chap. IX. CHILD-NURSING.—Great advantages the Company's infants would have, in comparison with those of private families,—even of the most opulent, much more of the indigent. —1. Medical curators, as well as head-nurses and nursery girls, prepared by the most eminent lecturers in this line. 2. Uninterrupted medical attention. 3. Uninterrupted nursing attendance:—nurses constantly sitting up—no avocations—no over-laying. 4. Appropriate exercise, administered by the help of machinery, in whatever quantity may prove most advantageous—not stinted by the portion of time and labour that can be spared from other occupations, as in private families.—Examples: The infants danced, as they lay in their cribs, in numbers at a time.—(See the plate.) The labour performable by the slight exertion of a *feeble* hand, the weight being taken off by a counterpoise. For airing, in conjunction with exercise, an open carriage being provided, upon a principle as simple as that of the *droshky* spoken of in Ch. iii.—the cribs (which for this purpose should be capable of being separated from each other) may be suspended from horizontal poles, supported by proper uprights. They might be drawn about in this way in numbers by a single ass; or in smaller numbers, on smaller carriages, on the same principle, by some of the bigger children.—5. A system of experiment, for the purpose of improvement, constantly carrying on on a scale covering the whole kingdom, and recorded according to an uniform plan of registration, pursued alike in every industry-house. —(See Ch. x.) 6. Attention, uniform, systematical, governed by principle:—not exposed to be relaxed by casual want of affection; or to be misguided by ignorance, prejudice, or caprice.—7. Best mode of bringing up by hand, a particular field for experiment—The great medical authorities to be consulted previous to the formation of the plan. 8. Attention sharpened by the *Life-Assurance* principle by premiums, and by the honour of publicity. Rate of vitality among suckled children the standard. Two children to be suckled by each woman delivered in the house, the woman being supplied with extra nourishment for the purpose:—mothers of bastards might be detained (say for six or twelve months after delivery) for that purpose. The great object of endeavour will be to reduce the mortality among weaned children, to a level with that of suckled children—what if still lower! Liberal premiums every year to the nurses, &c., of a certain number of the houses, in which the rate of infant mortality has proved lowest: emulation consequently among all the houses. To show how much has been owing to local situation, and how much to management, if an industry-house, in which a premium has been gained twice running, be in a situation deemed peculiarly healthy,—as in the Welsh mountains —transfer this part of the official establishment to a situation in ill repute for health,—such as the hundreds of Essex; or to any other industry-house, if there be any other in which mortality has been higher: if, under this disadvantage, the success be similar, augment the premium in proportion.—For the savings to be made in the expense of child-nursing, as compared with ditto under the existing system, see Book v. Ch. ii. *Pecuniary Estimates*—and see Book iii. Ch. xi. *Infant Mortality diminished.*

Chap. X. BOOK-KEEPING.—Peculiar extent and importance of the system of Book-keeping in an establishment of this sort—Besides being, in every case, an indispensable basis to good management, it is in the present case an indispensable security for the due discharge of the several obligations, which the Direction of the Company, and the several agents in the several local establishments, will have taken upon themselves, with relation to the various parties interested—viz. the *paupers*—their individual friends, the rateable parishioners, the stockholders, government, and the public at large.

In a small and *single* poor-house there may be neither the demand for a full and perfect system of book-keeping, nor the adequate means of satisfying any such demand: the difference between the best and the worst management that can be expected may hardly be sufficient to make up for the expense of an adequate system of registration; that is, of engaging persons competent to the task. In a system of poor-houses of the proposed extent and magnitude, good book-keeping is the hinge on which good management will turn: the demand rises to the highest pitch; and so (it will be seen) does the sufficiency of the means at command for satisfying it. With the instruction, and under the check, of an adequate system of book-keeping, the management may be better conducted by the most ordinary hand, than by the ablest hand without that

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advantage; and the good management accidentally introduced by an able hand, would vanish with the hand that introduced it. *Without* this advantage, everything would be too much; *with* it, nothing would be too much. *Without* it, any single one of the collateral benefits hereinafter proposed, might be deemed visionary; *with* it, all of them together would be found practicable, easy, and secure.

In book-keeping, the *heads*—as in management, the *principles* of the system—will be governed by the *objects* or *ends* which it has in view. Of the objects or ends of action requisite on this occasion to be kept in view, the list will, as far as it goes, be the same in the one case as in the other; and will not be much less extensive or diversified in the case of book-keeping than in that of management itself.* Pecuniary economy, *usually* regarded as the sole object of book-keeping, will *here* be but as one out of a number; for the system of book-keeping will be neither more nor less than the history of the system of management in all its points. *Health—comfort—industry—morality—discipline*—and *pecuniary economy*—(both branches included—the *saving* or *preservative*, as well as the *productive* or *augmentative*) compose the list of objects in view in the present instance. In relation to all these points, and at each period, it is equally necessary that it should be known what, at that period the state of the management *is* and *has been*, in order that it may, in no *future* period, be suffered to grow *worse*, but in every future period be made to grow *better and better* in as high a degree as may be.

The unprecedented multitude of establishments, all requiring to be conducted upon a plan in most points exactly the same, (say two hundred and fifty, spread at equal distances over the surface of the whole kingdom,) is another circumstance which enhances the importance of the process, and at the same time gives an unprecedented turn to it. In ordinary economical concerns, the whole system of management is single and insulated: here everything is comparative; under every head, the management in each house presents an object of comparison to the management of every other. In relation to each head, the management in each local establishment has therefore two hundred and fifty times the chance of being advanced to the highest possible pitch of perfection that it can have, in any insulated establishment standing upon the ordinary footing. To profit by this advantage it is necessary that the system of book-keeping should in each house exhibit, with the utmost precision, and in the utmost detail, what the management *is*:—as, for example—under the head of pecuniary economy, what the rate of *expense* is on each of the articles *consumed* or *used*; and what the rate of expense, on each of the articles produced: that it may be seen in which of all the houses the management, in relation to each of those heads, is most advantageous upon the whole; and thence, with a view to practise, that the management of the most successful house may be taken in each instance for a pattern, and copied in every other. To book-keeping in its ordinary form must therefore be added, in the present case, a new and peculiar branch, which may be styled *comparative* or *tabular* book-keeping. To that comparison between *period* and *period*, which is so instructive, as often as it is made, in the case of any private concern, may here be added the comparison between *house* and *house*.

The plan of registration—at least the plan traced out in the first instance—cannot be too particular:—multiplied by the number of industry-houses in the kingdom, (two hundred and fifty,)—by the number of souls in an industry-house, (two thousand,)—or by the number of souls in the whole pauper population, (five hundred thousand,)—the minutest article may swell into importance. The supposition to set out upon is—that everything is to be registered, for the registration of which any use whatever can be found; then to strike off the list such heads, if any, of which the use, it is supposed, would not pay for the expense.

Multiplication of the *number* of the books would render the business—not the more *complex*, (as at first glance it might seem,)—but the more *simple*: as in manufacturing establishments, the several operations, separately considered, are the more simple, the greater the number of the hands amongst which they are distributed. Allotting to each article a separate book, would save the writing the name of that article as many times as it would occur in a general book. The quantity of matter to be entered being *given*, no addition is made to the labour of entering by any addition made to the number of the books. Books in any number may be given in charge to one hand; so long as no two, that are designed as checks to one another be given to the same hand. *Multiplication* of books, is but *division* of the contents.*

Under the proposed system of management, as the *demand* for a copious system of book-keeping is in an unexampled degree urgent and extensive, so are the *facilities* afforded to the process of book-keeping, by the peculiar plan of architecture, equally unexampled. Compactness and simultaneous transparency

* Book-keeping is one instrument in the hand of economy, *architecture* (as we have seen) another. In all these branches of art, the list of objects to be aimed at is, in the present case, the same, in as far as their respective fields of action are co-extensive.

* The names of the articles, and other heads, will be predetermined, and already entered on written or printed forms: the scribe will have little or nothing to do, but under these heads to set down *individual* objects by their *names*, and *aggregates* by their quantities.

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—both of which properties it exhibits in perfection—are the principal points upon which the advantage turns. Elsewhere, the knowlege of the matter of fact requires to be communicated to the manager in chief, often through a variety of channels: *here*, it is present to all his senses, and requires only to be *preserved*.—No false musters—no running to and fro—no mislayings and huntings—no crossings and justlings, for the purpose of survey and registration:—every person, and every thing, within view and within reach at the same instant.—A degree of minuteness which might elsewhere be impracticable or unthrifty—(costing more than the amount of any advantage that could be made from it)—would be without obstruction, and without objection, *here*.*

Chronological and *Methodical*—*Elementary* and *Aggregate*—are the natural and fundamental distinctions between book and book, in a set of books, having for their common subject-matter the transactions of the same establishment—and they apply, not only to books in which *pecuniary economy* is concerned, but to all the several books that respectively bear relation to the several *other* heads of management here concerned. In a chronological book, the arrangement of the entries is governed by the order of *time* merely: in a methodical book, by some other order, according to the *purpose* it is designed to serve. Entries of the *elementary* kind are generally entered in a *chronological* book, in the first instance;† and from thence copied either in their separate and elementary state, or in *aggregate* state and expression, into a book of the *methodical* kind. Elementary entries are of course the foundation of the aggregate:—an error in an elementary article cannot but be productive of a correspondent error in the aggregate in which it is included: an error in an aggregate article may exist, without any error in an elementary one.

Considered with reference to their subject-matters, the books may be distinguished into—1. Population-books—2. Stock-books—(including accounts of articles received, issued, and consumed)—3. Health-books—4. Behaviour-books—and 5. Correspondence-books. The plans of the population-books and stock-books, (elementary and aggregate included,) including also in each instance an indication of the use, would take up so much room, that they must either be omitted altogether out of the present outline, or posted off to an appendix. Of the health-books a sketch will be given in Book iii. Ch. xii. *Useful Knowledge augmented, &c.*—To the class of behaviour-books may be referred—1. Complaint-books—2. Misbehaviour-books—3. Black, or punishment-book—4. Red, or merit-book.

Idea of a complaint-book—I. *Objects* of complaint to the pauper inhabitants of any house—1. Fellow inmates of the same house—2. Officers of ditto—3. The general plan of management—as manifested either by the established practice, or the rules and orders of the house—4. Paupers of other houses—5. Officers of ditto—6. Strangers at large. II. *Complainants* against the pauper himself may be—1. Fellow inmates of the same house—2. Officers of ditto—3. Paupers of other houses—4. Officers of ditto—5. Strangers.—These five last cases may be considered as belonging to the *Misbehaviour-book*.‡ III. *Heads* for a complaint-book—1. Time (day, hour, and minute)—2. By whom—3. Against whom, or what—4. Concerning what—5. To whom—6. By whom examined into—7. Witness or witnesses examined—8. By whom decided upon—9. Time when decided upon—10. Time employed in

* In the form called the Italian, book-keeping is a science of itself, and a most intensely difficult one. Happily it is not here a necessary one. It is not practised in any of the existing poor-houses; nor (what is much more material) on any of the occasions in which national accounts are delivered in to Parliament.—Thus much seemed necessary to be intimated, lest a large number of professed book-keepers thoroughly initiated in the intricacies of the Italian mode, should be regarded as a necessary part of the official establishment of each industry-house, and an acquaintance with their language a necessary condition to the faculty of understanding the accounts:—on the former supposition, the expense would be great indeed; and on the latter, the security for good management, as well as the satisfaction to the public not a little weakened. If two copies of one and the same original (the waste book) may be of use in the character of *checks*, of how much greater use will not two original accounts be, kept by two uncommunicating hands? For instance, in the case of articles transferred from house to house, the *transfer-inwards book* of the one house, and the *transfer outwards book* of the other.—In the public accounts, the *method* is the method called for by the subject-matter and the occasion, and the *language* is the language in use with everybody. Would public accounts be rendered the clearer, by translating them into a language composed entirely of fictions, and understood by nobody but the higher class of merchants and their clerks?

The real use of the peculiarities which characterize the Italian mode, might be a subject well worthy of investigation. I mean in the situations in which it is at present employed; for *here* every purpose of the Italian mode might be answered, and answered in perfection—(I give it as the result of a particular and very laborious inquiry) by a set of heads, taken exclusively from the ordinary language.

† To save the delay and danger of error that might result from determining in the first instance to what *methodical* head they belong to—and to preserve a constant assurance that nothing is omitted.

‡ If there be an *officers' misbehaviour-book*, it should be separate from the *common misbehaviour-book*, and kept by a separate hand. The name of the offender *need* not be entered—nor in the case of a first offence ought to be: the entry itself would be a punishment, and that a severe one. When a baker is fined for short weight, publication is held up to him *in terrorem*, as an ultimate punishment for delinquency otherwise incorrigible.

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the examination—11. Decision—12. Decision, by whom executed—(if it be a case calling for execution)—13. Time, &c., when executed.

Provision against suppression of complaints, where a pauper is complainant.—Time for complaining, a time when the whole official establishment is assembled—right of having the complaint entered in the book.—Complaints by paupers against paupers, will of course have officers for judges.—An appeal will in that case be a complaint against the officer who acted as judge. At every visitation (see Ch. v. *Official Establishment*) the governor bound to present to the visiters the books, exhibiting the complaints made by paupers, whether against officers, or against the management, for a certain time back. Complaints against the management not to be repeated by paupers after having been decided upon by the General Board. Punishment for complaints adjudged *rash* as well as *groundless*—still more if *malicious*, and made for the purpose of *vexation*.

Unexampled perfection, of which the system of procedure is susceptible in such a situation —the result, partly of the discipline, but principally of the architecture. Delinquency known the instant of its being committed: defendant, complainant, witnesses—(if distinct from the complainant)—judges—everybody—on the spot:—delinquency, complaint, trial, sentence, execution—might all be included—and without injustice—in the compass of the same minute.* Punishment may *here* be the less *severe*, in proportion as the *certainty* of it is the more entire: but in proportion as *punishment* is *certain*, *delinquency* will be *rare*. In case of complaints of a serious kind, (such as those which constitute a *legal* charge, civil or criminal,) the Industry-house itself will be a perfect, and the only proper, *safe-custody* house: by a common jail, such as common jails are at present, a scratch in the moral character would be inflamed into a death-wound.—(See Book iii. Ch. viii. *Imprisonment, &c.*)

In case of a complaint by a pauper against a stranger, if the stranger will not make up the matter, or it be a matter not fit to be made up, the consequence of a decision given against the stranger, will be a report from the house to the general Direction-Board—of which report, if confirmed, the consequence will be an order to prosecute.—Unexampled degree of protection thus secured to the pauper-population:—thence a degree of security, from which, by the intricacies and expenses, partly natural, partly factitious, of legal procedure, the self-maintaining poor—that is the great bulk of the community—are debarred. (See *Defence of Usury, and Protest against Law Taxes.*)

The *black-book* will be of use chiefly by its name; the matter of it will have already found a place in the *misbehaviour-book*: cases either of *high* delinquency, or of conspicuous *pertinacity*, (both classes rather ideal than probable in such a situation) will be the only ones proper to be put upon it.

Red-book.—The instances of the application of the *peculiar premium* principle, will constitute the *ordinary* matter of the *red-book*: *uncalled-for*, and *unexpected* manifestations of merit, the extraordinary. The chaplain, the "*recording angel*:"—one amongst other means of encompassing with sentiments of love and veneration the idea of this officer, the special guardian of religion and good morals.

Chap. XI. APPROPRIATE ESTABLISHMENTS—viz. for the *Insane*, &c.—In the instance of some of the classes, appropriate houses may be of use: the appropriation being *special*, but not *exclusive*; that is, the complement of the establishment being made up out of the other classes, rather than *room* or officers' time should be unemployed:—the central-inspection-architecture obviating whatever inconvenience might result from the *aggregation*, if, instead of being but *apparent*, it were *real*. ——Classes requiring appropriate establishments.—I. *The Insane.* II. *The Deaf and Dumb.* III. *The Blind*—in some cases.

Reasons for collecting together, into appropriate establishments, persons afflicted with the above infirmities—I. Reasons applying to the *curable* classes of the *insane*. 1. Benefit of appropriate medical curation and atten-

* The mode of procedure *observed* by a wise and good man in private life, in the character of a father or the master of a family, within the sphere of his authority—the procedure of the domestic tribunal —is a standard by which the fitness of a system of judicial procedure—the procedure of public tribunals —may be tried:—the mode of procedure *observable* in such a tribunal as that of the proposed industry-house, is a standard of still greater simplicity and perfection: the real difficulties, that *in some cases* obstruct the procurement of evidence, constitute but one cause indeed, but that the principal one, of the necessity which really exists *in some cases* of deviating from these standards.—Compare with either of them the refusal to examine parties in the *common law* courts—civil as well as criminal—and the practice of examining parties—but in writing only, and after a six weeks', month's, and fortnight's time for fabrication—in what are called the *equity courts*.—Delay is spoken of, by Montesquieu, as if it were of the essence of *justice*; and as if the greater the delay, the better the justice. But delay without special cause—all delay that takes place of course, and previous to the knowledge of the case —is—so long as it lasts—*injustice*. Lawyers, under the notion of coming at the truth, the whole truth, and nothing but the truth—lawyers of all nations—have, in the instance of certain classes of witnesses, (differing in their list of these classes without end,) refused to judge whether the narrative be, or be not, a true one:—assuming, that there are but two degrees of probity, in this respect, among mankind—that of the *ever-lying*, and that of the *never-lying*—and not considering, or not sufficiently considering, that a refusal to hear any sort of witness—how depraved soever—is a license to commit, in the presence of that sort of witness, all imaginable crimes. Apply these rules of inaudibility to a population composed exclusively of convicted felons.

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dance. 2. Giving to the patients the whole time, and entire attention, of the medical curator, undivided by miscellaneous practice. 3. Enlarging the field of his observation and experience. 4. Benefit of suitable instruction and superintendence, in respect of *employment*. 5. Ridding the ordinary houses of an annoyance.

II. Reasons applying to the case of the *deaf and dumb*; also to the *blind*, especially to children *born* blind, or become so at an early age. 1. Benefits of appropriate *education*. 2. As well as attendance—instruction—and superintendence—in respect of employment.—The deaf and dumb are of sound mind, or upon the footing of idiots, according to the care bestowed upon them at an early age.

III. Reasons applying to the case of the *incurably insane*—appropriate attendance, and (where susceptible of employment) instruction and superintendence. The insane of different descriptions—such as curable and incurable, susceptible and unsusceptible of employment, dangerous and innoxious, &c.—are not to be considered as necessarily allotted to the same establishment, one class as another, by reason of their common attribute of *insanity*; but may be aggregated to other establishments, and with other infirm classes, according to the nature of their respective cases. (See Ch. iii. *Separation and Aggregation*.)

Chap. XII. Pauper Education.—An inquiry concerning the best method of providing for the non-adult classes of the pauper population coming under the management of the proposed Company—that is, for each individual, during the period of his non-age—requires for its answer a complete plan of education, adapted to this numerous division of the community. The importance of the inquiry is in the joint proportion of the advantage to the *multitude* of the individuals concerned, and of the *degree of influence* which—in the situation in question—a plan for this purpose may be expected to manifest. The *multitude* included under the denomination of *the poor*, compose the bulk of the community:—nineteen twentieths might perhaps be found to belong to that class:—in the condition of one of these twentieths, the plan in question would exercise a direct and all-commanding authority; and over the remainder a very considerable,—and finally, perhaps, an all-prevailing—though less certain, and immediate, influence. If, in point of real importance, the education of the rich can bear any comparison with that of the poor, it can only be in respect of the influence which the conduct of the former class has over the latter. In the situation proposed, the conduct of the poor will depend—not upon the remote and casual influence of the rich, in the way of example or casual communication, but upon the direct and constant exercise of plastic power. The influence of the schoolmaster on the conduct of the pupil in ordinary life, is as nothing, compared with the influence exercised by the Company over these its wards. Yet these are the classes whose case is so generally overlooked by the writers on education: partly (it should seem) as not being worthy of their notice; partly as not lying within their reach.

Education is the conduct of the individual through the early part of life.

The proper end of education is no other than the proper end of life—*wellbeing*.

The wellbeing here in question is, partly that of the individual to be educated, partly that of the parties at whose expense, and by whose care, he is to be educated—viz. the proposed Company:—in respect of the wellbeing of the child, they are as *guardians*; in respect of their own, they are as *masters*.

From the commencement to the conclusion of the period of education, (comprising in this country the first twenty-one years of life,) the field of education comprises the whole of the individual's *time*.

The time of an individual is employed, partly in *active* occupations, partly in *repose* which is the absence of them all.—List of the *ends* or *objects* to one or more of which all occupations ought *here* to be directed.—I. For the advantage of the Company, as well as his own. 1. Profit of the pecuniary kind, the fruit of productive industry.—II. For his own advantage, in respect of his present condition in the apprentice-state. 2. Comfort (including amusement.) 3. Continuation of existence (viz. by nourishment.) 4. Health. 5. Strength. 6. Cleanliness. 7. Personal security.—III. Partly for his own advantage—in respect of his future condition after emancipation—partly for the advantage of the public at large. 8. Faculty of self-maintenance. 9. Faculty of self-amusement. 10. Intellectual strength. 11. Moral health. 12. Military strength. 13. Faculty of pleasing. 14. Religious affections. 15. Suitable instruction—instruction in all suitable points of art and knowledge.

Among these *objects*, some lead to others; many are compassed by one and the same *occupation*:—in some instances, the connexion is necessary; in others, it is dependent on management, and presents a wide field for improvement: and here comes in the application of the *several use principle*, spoken of in Ch. iv.—Examples—*Repose* and *comfort* sweeten the time occupied in *nutrition*.*—*Cleanliness* is subservient to *health*, *comfort*, and the *faculty* of *pleasing*. *Productive industry* is naturally, though not necessarily, accompanied by (bodily) *health*, *strength*, *the faculty of self-maintenance*, and *moral health*:—by management, not only may the connexion between these objects be much strengthened, but *intellectual strength* and *comfort*, (in the shape of *amusement*,) be added to the group.—Learning, otherwise of little value,—unless by being subservient to *intellectual strength*, is, (if suitable in kind,) capable of being made subservient to the faculty of *self-maintenance*—to the faculty of *self-amusement*—

* Concerning which, see Ch. vi.—*Diet*.

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to *moral health*—to the faculty of *pleasing*——and to *religious affections*.—*Military strength* (of use principally to the public) is naturally enough subservient to *comfort*, (i. e. to amusement,) and to *the faculty of pleasing*.—The *faculty of pleasing* depends upon native comeliness, (the gift of nature, not of education,) upon *health, strength, cleanliness, intellectual strength*, and *moral health*.* Of *religious affections, moral health* is in this world the great use. From suitable instruction (*suitable art and knowledge*) these sublime affections, as well as *intellectual strength*, may derive nourishment and increase.—Amongst active occupations (occupations accompanied with strong exercise) there is one, viz. *swimming*, peculiarly subservient to *personal security*—applying to a danger, against which there is no constant security by any other means:—and to this advantage is added *comfort*, (including *amusement*,) *health, strength, cleanliness*, and even *increase of strength* (by increase of security) in a *military* view.

Of *diet* and *clothing*, (two of the efficient causes of *comfort* and continuation of existence,) mention has been made in the Ch. vi. and vii.:—of *occupations*, considered as directed to *pecuniary profit*, in the Ch. iv. and viii.:—of the accession of *military strength*, that might be derived from the apprenticeship system, mention will be made in Ch. x. of the next book.—Of the remaining principles of education, relative to these and the several other objects, a compressed view may be exhibited by the following RULES and OBSERVATIONS:

1. In the whole system of occupations, and in each occupation in particular, the attainment of the several objects enumerated, in the greatest possible number, and each in the highest possible degree, (regard being had to their respective degrees of subserviency to the general end,) ought to be kept in view.

2. Of absolute *repose*, considered as the total negation of all active occupations, the quantity allowed ought to be, the least that can be made sufficient for health and strength.†

3. The efficient causes of positive *discomfort* being absent, comfort (amusement included)—comfort, even where it is but the collateral result, is the natural concomitant, of the several occupations which have for their objects or effects—*repose*, (especially after strong exercise,) *nutrition, health, strength, cleanliness, personal security*, the exercise of the *faculty of pleasing*, and the consciousness of possessing it; and, by suitable management, it may be infused into those which have for their objects *intellectual strength, moral health, military strength, religious affections*, and *suitable instruction*: and, towards the close of the period, the lists of comforts may be closed and crowned by *matrimonial society*; of which comfort is *naturally* the object, though the continuation of the species, with its attendant comforts and anxieties, is another fruit of it.

4. Strong exercises, seem in the instance of most individuals to be, in some proportion or other, necessary to the perfection of health and strength; and in particular, in non-adults, to the development of strength: and the greater the proportion of such exercises, infused into the mass of occupation, without excessive fatigue, or the support given by artificial stimulants, the better both for health and strength.

5. To answer in perfection the purposes of health and development of strength, a system of exercise taken together, should be *general* in respect of the parts concerned in it, *not local*: it should find employ for every limb and every muscle: it should not be confined to particular limbs, or particular motions of the limbs.

6. Of the occupations which, having profit for their object, come under the head of productive labour, health, and strength, (supposing a due admixture, as above of the different species of labour,‡)—health, strength, and even comfort, will be the natural, though but collateral results.

7. In the choice of occupations (due provision being made for health and strength, as above-mentioned) productive labour ought to take the lead: and that to such a degree, that no part of the time allowed by religion to be employed in productive labour, ought to be employed in any occupation directed exclusively to any other object, the portions of time allotted in each day to repose, nutrition, cleanliness, and religion, only excepted.

8. In particular, no portion of time ought to be directed exclusively to the single purpose of comfort;§ but amusement, as well as every other modification of comfort, ought to be infused, in the largest possible dose which economy admits of, into every particle of the mass of occupations by which time is filled.

9. The period preceding the birth of the faculty of productive labour, with the addition of those intervals of time from which, though not occupied by religious services, productive labour stands excluded by religious prohibitions, compose the time proper to be bestowed amongst the several other objects.

* In the higher lines of life, it is moreover cultivated by instruction of a particular cast, directed exclusively to this object.

† Sleep is not life, but the cessation of life: lying a-bed without sleep, is a habit productive of relaxation, and thence pernicious to bodily health: and in as far as it is idleness, pernicious to moral health.

‡ Out-door, with in-door—loco-motive, with stationary—strong, with gentle exercise.—See above Ch. iv. *Principles of Management*.

§ Make amusement, (*i. e.* comfort,) the sole end in view, regardless of those other objects, a sacrifice, not only of those other objects, but of comfort itself, will be apt to be the result. Those children are by no means the happiest, whose amusement is the most studied:—in particular, whose amusement is studied and provided for at the greatest expense. The faculty of leading to *profit*, either at once, or through the paths of dexterity and skill,

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10. Instruction considered in the *lump*, the *time* of its commencement should be the *earliest* possible: and, in determining the earliest time possible, the commencement of *physical capacity*, (ascertainable by experiment as well as observation,) not *usage*—should be the guide.

11. In determining the *quantity* of instruction to be administered within a given compass of time, *practicability*—not *usage*—should be the measure.*

12. In the choice of *subject-matters* of instruction, *utility*—not *usage*—should be the guide.

13. In regard to the *order* of commencement, as between study and study, natural facility, not usage, should be the arbiter.

14. The utility in view ought to bear reference—in the first place to the situation of the individual, *during* the apprenticeship; in the next place, to his situation in the world at large, *after* the expiration of it.†

Book III. Collateral Benefits.

Introduction.—Taken in its narrowest extent, the object or scope of a system of provision in relation to the burdensome part of the poor, is—the affording mere subsistence to all persons actually in a state of indigence, and willing to accept of relief upon the terms on which it is thought fit to be offered. An establishment being instituted for the purpose, whatever *further* benefits—to the burdensome poor, to the self-maintaining poor, or to the public at large; whether in the shape of employment, pecuniary assistance, security against depredation, or other moral evils—security against death, or other physical evils—comfort—accommodation—useful instruction—or in any other shape,—may be found capable of being ingrafted on this stock, may be termed, with reference to that direct and principal object, *collateral* benefits.

Under every other system that has been either exemplified or proposed, the task, even in its narrowest extent, is too great—by much too great, for any means that can be spared. Under the proposed system—Under a Company, instituted on *mercantile* principles, with an *undivided* authority, extending over the whole field of action—furnished with a competent stock of *land* and *capital*—acting according to the system of *management*, and that management registered and made public according to the system of *Book-keeping*, above pointed out—neither the extra-business here about to be proposed, nor a superstructure even of much greater extent, would be too broad for the foundation. Of these extra benefits, or collateral results, some take place, of themselves—others by means of a particular *direction* given to labour, without any addition to the *quantity* of it.—Those which require expense, in most instances either find or provide ample funds for the defraying each of them its own expense. Some may be found to be pure sources of profit—considerable and increasable profit, over and above the expense, or even without expense:—while, of such as may be attended with expense, the neat expense, taking them all together, would be as nothing in comparison with the sum of profit deducible from the rest. Considered with regard to its pressure on the intellectual faculties, the whole burden of management may be pronounced light and inconsiderable, in comparison with that which has been sustained with so much success by the East India Company, for such a train of years, especially since the improvements made in the constitution of that imperial body, by the super-imperial power of Parliament—(See Book v. Ch. v.)—Wisdom—true wisdom consists—not in the *scantiness* of *measures*—but in the *amplitude* of *means*.

Chap. I. Employment secured.—Certainty of the Company's being able, (so long as land is not wanting,) to find employment for any multitude that can present itself.—Necessary cost of maintenance—for men, not so much as 4d. a-day: capacity of yielding return of labour, not so little as 1s.—return, treble the expense. For women, cost of maintenance not more than 3d. capacity of yielding return by labour not so little as 6d.—return, double the expense. Non-adults, on the apprenticeship footing, on terms of permanency, and thence still more advantageous.—(See Book v. Ch. ii. *Pecuniary Estimates*.)—Were the balance on the profit side less, the liberation of the individual would indeed be less speedy, but the accomplishment of the benefit, in its utmost extent, not the less certain. With land and capital sufficient, worse than common management would suffice for this: and securities for better than common management have been

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is a property that may destroy the value of an occupation in the character of an amusement, in the eyes of a fond and prejudiced parent, but will not so much as diminish it in the estimation of the child. Forty pounds is no uncommon price for a house provided for the lodgment of a waxen child, and for the amusement of a human one:—forty pounds, by which, on the proposed plan, lodging for ever might be provided for eight children such as he: while his very amusement, *duration* as well *intensity* taken into the account, might have been much better provided for by his being led to take a part in the *making* of the house, than by all the industry that could be employed in getting him to *look* at it, when brought to him ready made.

* Not but that usage may with advantage be taken for a mark to aim at—provided it be not the most *general*, but the most *advantageous* usage:—and so long as the quantity afforded by that best usage be taken—not for the *maximum*—but for the *minimum*. That the greatest quantity administered *any* where, may be administered *every* where, is *certain*: that a *yet greater* than that greatest quantity may be, administered everywhere, is *probable*.

† The question whether any instruction of the literary kind ought to be administered, and the details of the system of instruction which, if any, would be the properest to be administered in such a situation, must be reserved for the body of the work.

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provided.—(See Book ii. Ch. iv. and x.—and see Book v. Ch. v.)—All the hands *here* in question, are *able* by the supposition; inability being already provided for by the principal and fundamental part of the system:—physical inability may, taking the country throughout, be considered as a fixed quantity, not susceptible of fluctuations, as want of employment is.

Company's employment, however, is but a make-shift—a dernier resort.—*Free* employment is the primary and preferable object: preferable as to the employment-lacking hands, because liberty and superior pay go along with it: preferable as to individual employers, because profit on their part goes along with it: and because in their instance the supply of it operates in satisfaction of a demand, which by the supposition exists already, and wants only to be made known.

This being the case, the terms given by the Company ought not to be so high as the terms given by individuals, much less higher: because, in either case, individuals would every now and then find their supply of hands narrowed by this means. On the contrary, the affording to individuals a *positive* assistance in this respect, ought to be added to the list of the Company's obligations: for otherwise a number of profit-yielding hands, who, by means of a suitable channel of intelligence, might have been made to find their way to individual employers, might fall to the Company's share. The refuse of the population, able as well as unable, is the lot best adapted to the situation of the Company. It is *natural* that it should fall to their share, because, after experience at least, it is natural for men to prefer liberty to confinement, independence to dependence: it is *desirable*, on all accounts, that it should fall to their share, and that as little else should fall to their share as may be: it is better for a good workman to fall to the share of a private employer, as well on account of the employer, as on that of the workman: it is better for a bad hand to fall to the share of the Company—on account of private employers, that they may escape being troubled with him—on his own account even, because the Company possess such means of making him better, as the private employer does not possess; and since they do possess those means, the possession of the workman, bad as he is when he comes to them, will, so long as the Company prescribe the terms, be no disadvantage to the Company.

Demand for labour might as well not *exist*, as not be *known* to those who have the labour to bestow: in as far then as, under the existing order of things, this demand fails of being thus known, thus to *cause* it to be *known* is as much as to *create* it. The thing requisite for this purpose is a *channel of intelligence*—a regular and constant channel of intelligence—co-extensive with the demand for employment on the one hand, and that for labour on the other.—Articles requisite to constitute this channel of intelligence—I. *The Employment Gazette:* a publication rendered accessible to all by its cheapness: rendered cheap by being cleared of all matter foreign to this purpose. The Company could render it free of expense to the employment-lacking hands, by printing and circulating it at their own charge, waiting for their indemnification to a later stage of the business.—II. A system of *Employment-Register* and *Intelligence-Offices*, spread all over the country at equal and convenient distances:—a set of constant *statutes*, (as the term is in some countries for those marts for labour, which serve in that capacity for no more than one or a few days in the year.) These for particular inquiry: the gazette for offers of service, and offers of employment, in general terms.—To this purpose the system of Industry-houses is already supposed to be adapted.—See Book ii. Ch. viii.

Mode of Advertising.—A master-employer, wanting hands, to apply at any Industry-house most convenient to him, paying so much a-piece (say 1s.) for every hand he wants: this, lest he should advertise for more than he means to employ—for the purpose of having the more to choose out of, or of swelling the apparent magnitude of his business:—fruitless journies after sham offers is an inconvenience that will thus be guarded against.—Deposit (say 10s. each) to be returned for every hand, the acquisition of whom is mentioned in a subsequent *counter notice* of supply. This, as before, to prevent disappointment, by preventing the continuation of offers which would not be realized. This counter-notice should be inserted by the Company in the next Employment-Gazette.—The offers should be numbered:—to indicate the total numbers, and for the purpose of being referred to in counter-notices of supply. An employment-lacking hand to pay for insertion (say one-fourth) of the daily pay he declares himself willing to accept: 1. To prevent wanton offers, as above: and, 2. Because if it were known that employment-lacking hands might make known their offers without any check from the expense, master-employers would lie by in expectation of such offers, partly to save the fees, partly to get hands on the cheaper terms, by receiving offers, instead of making them. The *master* is the party from whom it seems best that the offer should come: since, having an employment already, and wanting hands for that employment, and that only, it is for him to specify what it is:—what an *employment-lacking* hand wants, is rather *money* than employment: many will be willing to undertake, with or without reservation, any employment by which money is to be got.—No *deposit* here; sufficient counter-notice being insured by the master's deposit, and the employment-lacking hands not being always able to afford it.—By practice (which might be anticipated in some sort by intelligence) these advertisements would, on both sides, be thrown into settled *forms*; in the

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framing of which, amplitude of matter and conciseness of expression would be the main objects in view: *points of character* would come to be digested under heads:—general heads, of the moral cast, applying to hands in general: particular heads, of the professional cast, applying to this or that class of hands.—Examples of general heads—1. Age. 2. Character in respect of honesty, sobriety, good temper, assiduity, despatch, dexterity, &c. 3. Employment desired, exclusively or preferably. 4. Number of years' experience in that or similar employments (naming them.) 5. Wages demanded, &c.

To the Industry-house hands, the benefit of the Employment-Gazette might be given *gratis:* the Secretary, under the direction of the Governor, and with the privity of the rest of the official establishment, digesting and methodising their *offers*. The same matter in two different forms:—1. According to the *occupations in* which employ is wanted; 2. According to the class of *hands by* which it is wanted.—Classes to be distinguished in this point of view—1. *Free* hands at liberty immediately. 2. *Self-liberation* hands, at liberty after the debt is worked out. 3. *Bonded* hands—Hands not suffered to leave the Industry-House but upon certain conditions—for which see Ch. ii. *Mendicity extirpated*—and Ch. iii. *Habitual Depredation extirpated.*—These, with their divisions, as per TABLE OF CASES CALLING FOR RELIEF. 4. Out-poor hands—viz. self-maintaining hands—not belonging to any Industry-house.—The numbers of candidates for each employment, within a given period, *at* (or, in the case of self-maintaining hands, *resident near to*) each Industry-house, should be noted. Under both heads, notice of the amount of increase or decrease, as thus—1. Offers *remaining* on the last day of publication, so many. 2. *Fresh* offers, so many. 3. *Gone off* since the last day, so many. 4. Remaining *at present*, so many.—Returns from situations distant from the place or places of publication, would of course come in later and later, in proportion to the distance: hence another source of division and arrangement, regulated by the course of the post.—General totals and balances, every year, or oftener. The established *Corn returns* afford something like an example, though of course not near so complex and voluminous. The press to be set at one place only, viz. London, or at several parts of the country at once, according to the quantity of the matter.—For example: Home Counties, northern, and western—a place for each. Each Industry-house would be a general repository for the series of these gazettes, as well as a place of resort for the explanation of their contents. The walls of the *approach* would be a proper receptacle for these gazettes, if printed only on one side.—(See Book ii. Ch. iii. *Buildings and Land.*)—Very small fees for search and inquiry, (say 1d.) just sufficient to prevent wantonly-troublesome applications. A receipt to this amount would be sufficient for the expense; clerks being trained up out of the apprentice stock, maintained or paid according to the frugal plan of the house. To render the provision perfect, by giving to the benefit in view its utmost possible degree of extension, would require the use of the system of Industry-houses in their further proposed capacity of *frugality-inns*, and *frugality-travelling stages;* whereby an employment-lacking hand, though pennyless, would be enabled to travel from any part of the country to any other.*—(See Chap. vii.)—Hence one out of so many reasons for placing the Industry-houses at distances as equal as possible.

Less immediate effects and uses of the institution, over and above the more immediate ones of affording subsistence and occupation, on the most advantageous terms, to employment-lacking hands, and hands to master-employers—1. Promoting the augmentation of scanty wages. 2. Promoting the reduction of exorbitant wages. 3. Promoting steadiness in the rate of wages. 4. Preventing combinations among masters for sinking or keeping down wages. 5. Preventing combinations among working hands for raising or keeping up wages. 6. Keeping present to their view tables of rates of wages, that (for themselves and children) they may make a timely choice of the most profitable and least over-loaded occupations. 7. Reducing the prices of commodities, in as far as kept up by exorbitant wages.† 8. The Employment-Gazette and Register will be a useful check; and, with the help of the *visitation* plan, the *complaint-book*, and the all-comprehensiveness and perfect publicity of the rest of the book-keeping plan, an effectual check against contrivances on the part of the Company or its local agents, for keeping out of *free* employment, and thence keeping to the Company and themselves the most profitable hands. The rate of a man's pay is public; the goodness of his performances are open to inquiry: if he disputes, in any point, the character given of him by the agents of the Company, he may refer to other testimonials.‡

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* At present, if a single man be a self-conveying animal, a poor man with a family is virtually immoveable: and if, without his family he goes in quest of employment, he is punished by the parish as for desertion, under the name of a vagrant.

† Exorbitant wages, and still more deep fluctuating wages, are the bane of happiness as well as morality, among improvident and uncultivated minds. Stagnation is ruin: a fall produces the sensation of a tax: a rise drives a man into sensual excesses:—excesses which, in one who, for want of education, has no fund of *self-amusement*, no other tastes to gratify, are fatal to health, industry, and content.

‡ Even previously to the institution of the proposed Company, no inconsiderable advance might be made towards the equalisation and *stabilitation* of wages, by *Tables of Trades*, or (to speak more

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On the plan here proposed, maintenance coupled with employment—preservative and improving maintenance, not corruptive, as in the idleness of the present poor-house or pensioned cottage—is rendered absolutely secure to everybody: of the sort most eligible to present feelings, as far as the stock of that sort will go; and where that fails, it is only by giving place to another sort still more favourable to morality and lasting happiness.

Additional Matter.—Intelligence capable of being ingrafted on the Employment-Gazette; or rather on which the Employment-Gazette might be grafted, being more certain and regular in its amount—Periodical (say weekly) *pauper-population reports:* being abstracts of the population-books of the whole system of Industry-houses.—(See Book ii. Ch. x. *Book-keeping.*) The *escape list* (including *out-stays* from *furlough*) would answer a further purpose, if accompanied with statements of identification marks, (in French *signalement,*) and rewards for apprehension. The benefit would be extended by admitting of escape notices from *without doors;* in the instance of *children-wards, apprentices, army and navy deserters, prison-breakers,* and other fugitives from justice.

Promulgation.—The lists of offers of *employment* and offers of *service,* articles comprising the principal matter of the gazette, may be distributed to the parishes in the whole or in parts, according to the chance there may be, in the instance of each parish, of its affording supply to either branch of the demand. These papers may be conveyed either by the *general post,* or by and from each Industry-house within its district: they may be directed to the *parish clerk,* the only species of public officer whose abode is permanent, and his residence constant and certain; to be read by him, in the whole or in part, and then stuck up in a certain place within or without the church. The Pauper-Population Report might be read by the minister, and, by means of suitable comments and offices, be ingrafted into the Liturgy:—prayers (deprecatory) for the unprosperous, thanksgivings for the prosperous part, of the results. An office of this kind would come home to the business and bosoms of the audience: it would be congenial to that gospel, in which the concerns of the poor are the objects of such anxious and distinguished notice. The gospel itself means, in the original, *good news:* this would be truly gospel news. By the constancy and universality of the attention it would excite, it would be among the most powerful of the securities for good management, particularly in regard to the points in which humanity and morality would be more particularly concerned. *Briefs,* which solicit attention in behalf of inconsiderable fragments of the mass of the poor, or pretended poor, present a very inferior title to admittance.

Indemnity to the Revenue.—The utmost possible degree of cheapness is essential to that universality of promulgation on which the utility of this part of the plan depends. There seems no reason why a stock of intelligence, instituted expressly for the benefit of the poorest classes, should, in as far as it is *new,* be taken for a source of accession to the revenue. It is no small matter that charity, and that of so useful a sort, be administered without expense to government. That the revenue may not be deprived of any part of the supply *at present* derived from this source, the Company might compound with the Stamp-office, paying, yearly and forever, the greatest amount ever received in a year, reckoning (suppose) ten years back, for advertisements of this class: in the character of a newspaper nothing, it not being a paper of general intelligence. Escapes from without doors might be excepted from the composition: so offers of service *from,* and of employment *to,* domestic servants: male town servants at least, who may be reckoned among the *overpaid* classes. The benefit to them would still be great, by the universality of the circulation.—An indemnity to existing newspapers for the loss of this source of profit seems also to be requisite.

By no other hand than that of the proposed Company, could this invaluable national benefit be created to advantage: by government not near *so well:* by a loose multitude of scattered Industry-houses, under separate mangement, not *possibly.*—(See Book v. CONSTITUTION DEFENDED.)—The existing law of *settlements,* and the existing law of *apprenticeships,** both join in opposing the circulation of labour.

comprehensively) of *profit-yielding Occupations,* with their correspondent earnings:—an existing publication, professing to include this object, gives but a very small part of the number of the trades: the author of this having collected as many again, without supposing himself to have gone half way towards a perfect list.—Judging from the state and comparison of the classes of interests concerned, so much at least of the plan as concerns the reduction of exorbitant wages, bids fair for being executed; inasmuch as the parties to whose interests it is favourable, are the major part, as well in number as in opulence and power. The classes to whose interests it is advantageous are—1. The class of *consumers* (that is, everybody.)—2. The class of *master-employers.*—3. The class of *under-paid* hands.—The only class to which it is disadvantageous, is the class of *over-paid* hands: to these it cannot but be confessed to be in a certain point of view disadvantageous, since to their immediate feelings it cannot but be galling—however advantageous to their lasting interests. It is only in some such indirect and remote, in some such gentle and uncoercive way, that government can occupy itself, to any good effect, either in raising, sinking, or steadying prices: operating not by the *creation* of inducements, but by bringing into *notice* inducements which spring of themselves from other sources.

* This latter has been materially amended by 54 Geo. III. c. 96. As to settlements, see editorial Note at commencement.—*Ed.*

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The former would vanish of course: the latter has ever been a nuisance, against which many have protested, and for which nobody has ever pretended to find a use.

Chap. II. MENDICITY EXTIRPATED.——Section I. *Compulsion indispensable.*—The Industry-house system (the Company being invested with the necessary powers) a certain means, and, in this country, at least, the only possible means, of extirpating mendicity. In this country, under the existing poor laws, every man has a right to be maintained, in the character of a pauper, at the public charge: under which right he is in fact, with a very few exceptions, (amounting not to one perhaps in fifty,) maintained in idleness. But in this same country the condition of the common beggar is more eligible, in his own estimation at least, than that of a pauper, maintained in idleness; for, if it were not, he would become a pauper, having it in his option so to do at any time. It would be absurd, therefore, to expect that by any management—at least, by any good management—the Industry-house provision could be rendered generally acceptable to beggars: that is, that a system which affords bare maintenance—maintenance in the most frugal and least luxurious shape—nor that otherwise than on the condition of working, as far as ability extends, to the full amount of it, should be preferred to a mode of life exempt from working—to the condition of him who is not at present the lowest of those who are maintained in idleness. If, in any country out of England, plans for the extirpation of mendicity without compulsion, (*i.e.* without bodily compulsion,) have met with a temporary success, no inference can be drawn from the success of such a plan in those countries, to the success of a similar plan in England; since, in those countries, beggars being liable to starve, and many, doubtless, being starved, the question will have been, whether to accept of the proffered provision, or starve:—whereas *here* the question would be, whether to accept of it, or to be maintained in idleness. If, notwithstanding the adoption of the proposed system in other respects, begging were to be tolerated, the nuisance would be much greater than at present: since, of those who are now maintained in idleness in the character of paupers, multitudes, rather than be set to work, would become beggars.

Section II. *Compulsion justifiable.*—Mischiefs produced by the practice of begging—1. In the instance of passengers in general, considered as exposed to the importunity of beggars—to some, the pain of sympathy:—no pain, no almsgiving;—begging is a species of extortion to which the tender-hearted, and they only, are exposed. 2. Disgust; which may exist where there is no sympathy:—the sympathy experiences a sort of relief by giving; the disgust finds no relief.—From the disgust excited by the presence of a filthy beggar, none but the equally filthy stand exempted. The multitude of the persons subject to this pain of sympathy, or to this disgust, considered, there can be little doubt but that the sum of these pains taken together is greater than the difference to the beggar in point of comfort between begging and working. 3. Discouragement to industry. Every penny spent is the reward of industry: every penny given, a bounty upon idleness.—The luxuries seen in many instances to be enjoyed by beggars, are a sort of insult to the hard-working child of industry: by holding him out as a dupe, who toils and torments himself to earn a maintenance inferior to what is to be earned by canting and grimace. 4. Facility afforded to real crimes.—Mendicity, by the removal of shame, removes one of the chief safe-guards to honesty: and to tolerate beggars, would be to tolerate habitual depredators; for those who are now *unavowed employment* hands, would *then*, if under *that* name subjected to compulsive industry, declare themselves beggars. 5. Unfavourable influence on happiness, even in the instance of the begging tribe itself, taking the whole together.—There are many, it is true, who, for a time at least, would, unquestionably, be no inconsiderable sufferers by the proposed change. But the greater part would be gainers in point of happiness, at least in the long run: since—(it being a property of this as of other unlabourious professions to be overstocked)—for one prosperous and happy beggar, there are probably many unprosperous and miserable ones; wretches who, notwithstanding, keep lingering in their wretchedness; sometimes for want of power, sometimes for want of resolution, to emerge from it. The discomfort would cease at any rate with the existing stock of prosperous beggars: the benefits would be everlasting: and the disturbance of the prosperity of the prosperous ones appears to be a sacrifice necessary to the attainment of the benefit.

Section III. *Plan for the Apprehension of Beggars.*—Power to any one to apprehend a beggar, begging in any public place, and conduct him either to a constable or to the next Industry-house.*—Obligation on constables and magistrates, with power of commanding assistance.—Reward 10s. or 20s. advanced by the Governor, and charged to the beggar's account. The whole to the constable, if he apprehends on view: if on simple information, the informer to have a quarter: if on information, accompanied with apprehension, half.—Necessity in this case of admitting the informer as good evidence. Power of commitment to the governor, or else to the chaplain; the latter being without pecuniary interest in the management.—Intervention of a magistrate (unless the chaplain should be nominated to the magistracy) would produce complication and delay, and might render the execution of the law

* This power exists already in the case of felons, and seems in little danger of being abused; since, in exhibiting the beggar, a man exhibits himself at the same time.

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less steady.* Time of detention, till the beggar's self-liberation account is balanced.—(See further on.)—*Items* for which the beggar is to be debited.—1. Reward for apprehension, as above. 2. Expense of conveyance.† 3. Diet, while in the house. 4. Use of clothing and bedding, while in ditto. 5. Medicine, or any other articles of separate expense. 6. Individual's share of the joint expense of the house for the time. 7. Ordinary profit upon so much of the Company's capital as is employed in the defraying of that expense. 8. Expense of life-assurance in this instance: *i. e.* equivalent for the chance of his dying before his account is balanced.

Section IV. *Provision after Discharge.*—Beggar's *offer of service*, for any employment of his choice, to be previously inserted in the Employment Gazette. No discharge, however, without a responsible bondsman, (a housekeeper paying taxes,) undertaking for the giving him a specific employment, not to be withdrawn till after (suppose a week's) notice to the house: giving notice also to the house of the beggar's departure, on whatever day it happens, or the next. The beggar to enter into a corresponding engagement on his part—not to depart from such service without (suppose a week's) notice to the employer; and, upon departure, to return that same day to the Industry-house, unless provided with another employer, on the same terms;—and so *toties quoties*. This *probation period* to continue (say) a year: and at the end of it, the beggar to be entitled to his certificate of *full emancipation*.—Failure of such notice or return, to be considered as an *escape*, and advertised as such in the *Employment Gazette*, with a reward quadruple to the original one. In case of a relapse into the begging trade, the original reward doubled; in case of a second relapse, quadrupled: and so on, doubling it each time.—The self-liberation account not to be balanced by money, but by labour (otherwise rich beggars might, in despite of the provision, continue their trade) or, if balanced by money, only in part. By coming in as a volunteer, a beggar will save himself from the expense of being pressed, and from the clog of the *probation period*. The provision will tend so far to execute itself.

Section V. *Evasions obviated.*—Classes that must be considered as beggars, or the provisions would be nugatory. 1. Offerers of pretended services to passengers.—Examples: Street and road sweepers—Layers of boards over kennels—Link-bearers—the two last are apt to be in confederacy with pick-pockets. 2. Pretended hawkers.—Hawking to be deemed a *pretence*, if the quantity remaining exposed to sale be too small to afford a profit equal to a day's subsistence. *Licences* might serve to distinguish the real from the pretended. Acceptance of alms, in a road, street, or other public place, with or without previous petition, sufficient *evidence* of begging:—dumb show may be as expressive as words.

Section VI. *Almsgivers unpunishable.*—1. Penalties on *givers* of alms would be *needless;* since if nobody durst take, nobody could give. 2. *Unpopular:* being penalties on the exercise of what, in respect of the disposition and motive, or apparent motive, at least, could not be denied to be a virtue. 3. *Obstructive of the end* in view: since, in the case of begging by dumb show, it would take off the only *evidence*.—Punishment is out of the question on both sides: even in the case of the beggar, what is proposed to be done is no more a punishment, than sending a boy to school is a punishment. No pain inflicted on purpose, for the purpose of operating on others by the prospect of it: and the duration of the discipline is made to depend upon the exertions of the party subject to it:—in the instance of the *lazy* hand, as in the instance of any industrious *self-liberation* hand.

Section VII. *Existing Remedies incompetent.*—Remedy 1st, Punishment under the Vagrant Act, &c. (17 Geo. II. Ch. v.) The effect of this provision is rather to *obstruct* the design than promote it.—Whipping does not give employment. Imprisonment in a common jail, so far from giving employment, excludes a man from it: besides corrupting him, by aggregating him with bad characters of all sorts, out of the reach of all tutelary aggregation and inspection.—The prisons called *houses of correction* are not universal; and where they exist they afford little or nothing of *correction* but the name. They either afford him no employment at all, or an employment which will be no resource after discharge: an employment not to be had elsewhere, because not affording a maintenance to the workman, together with an adequate profit to a master-employer.† 2. The

* In the Shrewsbury house of industry, a similar power is vested in the Board of Directors.

† As in case of a beggar unable, or pretending to be unable, to walk; or in case of his being refractory, and extra assistance hired. This will render it the beggar's interest not to give unnecessary trouble.

‡ List of *requisites*, the *concurrence* of which is necessary to the carrying on a branch of manufacturing industry without loss. 1. Building suitable—in point of space—materials—dimensions—and divisions.—2. Land sufficient.—3. Appropriate stock of all kinds, in hand or at command, in sufficient quantity and value.—4. Scale of the establishment, in point of number of hands, &c., large enough to afford adequate recompense for a suitably-qualified manager's time.—5. Mode or terms of management, mercantile—the manager having a sufficient pecuniary interest in the success.—6. Stock of hands so circumstanced, as to be depended upon for a continuance.—7. Appropriate instruction administered.—8. The managing hands, by education and habits, qualified for the charge.—9. A system of book-keeping appropriate, adequate, and regular.

The existence of these united requisites, in here and there an instance, would avail nothing, unless it were universal; since the preparing for the beggar, in one district, a place of reception which was not to his taste, would but drive him into another.

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law is *inexecutable*.—The mere want of jail-room would itself be a physical bar to the execution of it. The spare room in all the existing jails and houses of correction put together would scarcely *lodge*, much less *set to work*, the *beggars* alone, without reckoning the *unavowed-employment hands*, and other classes aimed at by the act. Were it even capable of being executed, the necessary parties would not generally concur with the degree of willingness requisite for the execution of it:—*magistrates* not, were it only in consideration of the useless expense to the public: *constables* not, through compassion, and fear of odium: private *informers* not, the reward being so small, and, on account of the known disinclination of the other parties, the trouble of the business being so much more certain than the success. Hence it is, that (excepting the punishment of here and there an individual who happens to be particularly obnoxious) things go on as if there were no such law: and the limits that are set to the number of this tribe, are set—not by the operation of the laws, but by the quantum of encouragement afforded, within a given space, to this mode of life.—If the law had any effect, otherwise than in the way of casual and useless punishment, it could only be that of driving a man out of the street into the poor-house: that is, quartering him upon the *unwilling*, instead of the *willing*.

Remedy 2d.—*Private Bondage*;—by an old statute still existing, but scarcely known.—(5 Eliz. Ch. iv.)—In the case of *males*, under a *self-appointed* master, from any age not under twelve, up to sixty.—This remedy, such as it is, includes beggars no otherwise than as it includes everybody, certain denominations only excepted. 2. *Females* do not lie quite so completely at the mercy of a self-appointed master: servitude expires when beauty begins to fade:—at forty years of age:—and the magistrate has a control upon the choice.* The very existence of a law like this, is sufficient proof of the inefficiency of it; since the execution of it would never be endured. 3. With all its harshness towards the intended servant, it holds out no adequate advantage to the intended master:—for it affords him no adequate means of securing either the service or the person of the bondsman. While willing servants are to be had upon such easy terms, no man will encumber himself with an unwilling one, without the power either of confining him to prevent escape, or apprehending him afterwards.

Parallel between the proposed Remedy and the two existing ones.

Existing Remedy 1st.	*Proposed Remedy.*
1. Whipping.	1. No whipping, or other punishment.
2. Scene of confinement, a close prison.	2. Scene of confinement, a spacious country farm.
3. Duration not abridgable by a man's own exertions.	3. Duration abridgable by a man's own exertions.
4. No means of industry.	4. Means and habit of industry uninterrupted.
5. No means of future livelihood.	5. Future livelihood secured.

Existing Remedy 2d.	*Proposed Remedy.*
1. Term of servitude, any number of *years* up to forty-eight, according to a man's age.	1. Term, a very few *weeks* or *days*: more or fewer, according to a man's own exertions.
2. Master, self-appointed—anybody, be his character ever so bad, and temper ever so intolerable.	2. Master, a man of character and education, appointed by a great public company.
3. Scene, a private house—unconspicuous—uninspectable.	3. Scene, a public establishment, of the most conspicuous kind.—Management transparent,—inspection uninterrupted and universal.

Chap. III. Habitual Depredation extirpated.—Section I. Measures the same in kind as those which serve for the extirpation of *mendicity*, will serve and suffice, nor will any others suffice, for the extirpation of *habitual depredation*. But here the *reward* may be greater, because the *service* is greater; the mischief to which it applies the remedy being greater, as also the danger that may attend the rendering the service. The reward being greater, the *self-liberation period* will be proportionally longer, of course; and the *probation-period* may be rendered so. The necessity of compulsion is still greater here, because the repugnancy is still greater:—beggars are so, because they are above being paupers; habitual depredators are so, because they are above being beggars. It would be a sad inconsistency to extirpate the undangerous habit, and leave the dangerous habit untouched. The habit of depredation may be inferred with the most perfect certainty, and without the possibility of injury, from the want of honest means of livelihood, (sufficient property as well as honest occupation included) coupled with the non-exercise of mendicity: for existence has no other means of support. What is *not* known, is, whether a man is a smuggler—a sharper—a coiner—a thief—a highwayman—or an incendiary:—what *is* known, is, that he is one or other of these, or several in one. This, though an in-

* *Appius*, therefore, under this law could not have possessed himself of *Virginia*, without taking the part that he took at Rome.

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direct, is an irrefragable proof—not only of an *act* of depredation, but of a multitude of such acts: a multitude sufficient to constitute a *habit*. If any one of them were specifically proved in a legal way—in the course of a criminal prosecution—a man would be dealt with as a criminal: this proof being wanting, he can no otherwise be dealt with than as one to whom honest employment is necessary, and who is not provided with it. The inference with respect to the existence of the habit of depredation—the ground of proceeding—is therefore still stronger, in the case of the *unavowed-employment* hand, than in the case of the *suspected* hand, or even the *stigmatized* hand. In the first case, there is *certainty*: in the other, it is but *suspicion* and *apprehension*:—unless the *suspected* or *stigmatized* hand happens also to be an *unavowed-employment* hand; a coincidence not unfrequent, but nothing like universal. The *suspected* hand, having been adjudged unpunishable, must not be punished: the *stigmatized* hand, having been punished sufficiently, must not be punished more. But this, it has been already shown, is not *punishment*.—The remedy is in little danger of being employed where it is not wanted: for if a *suspected* hand, *i. e.* a person discharged for want of legal proof, be really innocent, and looked upon as innocent, and of good character, bondsmen will not be wanting: even supposing him guilty, and believed to be so, if he be but a *casual* depredator, not an *habitual* one; for a bondsman may then get him on reduced terms, and the reduction may be his indemnity for the risk.

Section II. *Proof of Habitual Depredation.*—Living without any assignable and honest source of income (an act of which habitual depredation is the necessary consequence) being a *negative* act, or rather *habit*, proof of it cannot be obtained but from the party himself: *positive* acts offering themselves to sense, proof of them may be obtained from those to whose senses they have presented themselves: negative ones, not offering themselves to sense, can no otherwise be proved than in the way of inference; viz. from the want of proof of the opposite and corresponding positive matters of fact on the part of him, whose interest it is, or is made, to furnish such proof; and who is so circumstanced, that supposing them to have had existence, he could not but have it in his power to demonstrate it. To put the party to the proof, is in such a case, to *interrogate* him. Interrogation of the party is therefore an indispensable ingredient in the proof of want of honest livelihood. Employment supposes an employer. Honest employment does not shun the light, but court it; employment that does not shun the light, supposes witnesses to every circumstance belonging to it—the *place* operated in—the several *subject-matters* of the operation—the *operations* themselves:—so many partners to the operation—so many witnesses:—and to the *disposal of the result* there are at least as many witnesses as there are *parties* to it, and commonly many more. Under these circumstances, any the slightest indication of the want of honest livelihood may be looked upon as affording sufficient ground for putting the question—*Have you any honest means of livelihood, and if so, what is it?*

Indications that may be established as sufficient grounds for examining a man, for the purpose of ascertaining whether he has any sufficient means of honest livelihood; and thence, whether it shall be lawful and proper to consign him to an Industry-house, in the character of an *unavowed-employment* hand.—1. Conviction of an act of depredation—followed by punishment for a term, and the punishment undergone: (the case of *stigmatized* hands.)—2. Prosecution for ditto grounded on oath, though for want of legal proof not followed either by punishment or conviction; or, by stretch of prerogative, the party withdrawn from punishment:—the case of the *suspected* hand.—3. Accusation of an act of depredation, by a charge, which, though specific, has been deemed insufficient in the character of a ground of commitment for trial.—4. Oath by a person of character, declarative of a suspicion that the party has no honest and adequate means of livelihood.—5. Even strangership to the place, if coupled with more than traveller's stay, and with apparent indigence.

Examples of Heads of Interrogation.—1. What *are* your means of livelihood?—2. What *has* it been for (say one) year past?—3. In what places have you served or worked?—4. Whom have you *worked for*, or *served* under?—5. Whom have you worked *with*?—6. With whom have you *dealt* for the *materials* and *implements* of your work?—7. With whom have you dealt for the *produce*, &c.—If no answer, or no satisfactory answer, commitment to the next Industry-house, on the footing of an *unavowed-employment* hand. The answer in such a case seems not much in danger of containing falsehood, the falsehood being in its nature so open to disproof:—but in case of falsehood, the answer being on oath, will be punishable as perjury.—Power of provisional commitment to the Industry-house, on declared suspicion of perjury. Whether the rule prohibiting the extraction, or even reception, of evidence deemed *self-criminative* be reconcileable to the ends of justice—whether it be steadily observed by those who profess to regard it as sacred, are questions which have *here* no place—*here*, no crime—no punishment—no crimination—no self-crimination.

Section III. *Families of the Disreputable Classes.*—The provision would be incomplete, if the rising generation were left out of it; if it neglected the *many*, after providing for the *few*.—1. *Non-adults* being *themselves* beggars, stigmatized hands, suspected hands, or unavowed-employment hands, might be bound on the footing of apprentices: their respective *accounts* on the *self-liberation* principle, not to

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open till their arrival at full age.—2. *Non-adults*, being *children* of a beggar, and living with the parent, might for this purpose be *presumed* beggars, *unless* an adequate, honest, and industrious occupation be proved.—3. So in the case of the children of unavowed-employment hands.—4. Children of a stigmatized or suspected hand, to be *presumed* unavowed-employment hands, unless as before.—5. Also children of a *confined* hand, confined in execution for a *predatory* offence.—6. Children of a *confined* hand, confined for ditto, on *mesne process*, to be consigned or not to the Industry-house, till the trial of the parent, on recommendation of the committing magistrate, at the discretion of the chaplain of the House.—7. Failing the father, the mother or other *next friend*, being master or mistress of the abode in which the child resides, to be regarded on the footing of the father, for this purpose.—8. Children (unless for special reason assigned by the children) to be consigned to the same house with the father, for his comfort and satisfaction, exposed habitually to his *view*; but, to preserve them against corruption, not exposed to his conversation, unless in the presence of an *officer*, or two or three *guardian elders*.—9. Provision of detail against collusive apprenticeships, and other contracts entered into for the purpose of frustrating the above provisions.—The general presumption—that the parent is the child's best guardian—fails here. The parental influence would be employed—not in the *support* of morality, but in the *destruction* of it. In the case of the *notoriously immoral*, the parental power may require to be suspended till recovery, as in the case of the *insane*; and for that purpose transferred, although involuntarily, in the present case, as it is voluntarily in the case of ordinary apprenticeship.

The *wife* of a beggar, unavowed-employment hand, stigmatized hand, or suspected hand, consigned to an Industry-house, might be consigned (if living with the husband) to an Industry-house likewise, unless by consent of all three parties, the husband, the wife, and the Direction Board, (on report from the chaplain,) it should be ordered otherwise:—and to the *same* house, unless on petition, by either husband or wife, it be determined otherwise:—and (unless on like determination, grounded on like petition) the *self-liberation* accounts of husband and wife should then be consolidated into one—that when the parties go out, they may go out together. Cohabitation should be received as presumptive proof of marriage, for the purpose of justifying on the part of the Company the exercise of power to this effect; unless and until this presumptive marriage be disproved, by a valid one with a husband or wife living at the time of the proof.

Section IV. *Efficiency of this Plan.* By this plan might be accomplished—and that in a degree little short of perfection—upon an all-comprehensive scale—and not only without expense, but with profit—what at a vast expense, and with inadequate powers, a most respectable Society have so long been striving at, upon a comparatively minute scale. In 1795, numbers provided for, 131: rate of expense per head, £28, 10s. a-year, over and above earnings. Total cost of the pauper population, were the whole of it provided for at that rate, £14,250,000 a year.—Extirpating *habitual* depredation, will not extirpate depredation altogether, but it will go a great way towards it:—*casual* is probably the smaller branch.

Section V. *Ulterior Securities.*—To give the plan, even as against habitual depredation, its utmost degree of efficiency, might require some such institution as that of an *universal register* of names, abodes, and occupations; with power to magistrates, in certain cases, to examine parties as to the truth of their returns:—in a word, Mr Morton Pitt's *Census* rendered all-comprehensive and obligatory.—Fragments of such a work are growing up as it were of themselves.* This and more is done by government every half year, in the case of the affluent and undangerous classes, for the purpose of taxation: those in whose instance it would be *doubly* useful, are alone exempted from it. Were the examination even oral and public, (which, however, it need not be,) as well as universal, the highest dignity would be rather illustrated than hurt by it.† Leaving the extirpation of casual depredation to some maturer age, which, with intelligence enough to recognise the defects in the law, may possess energy enough to correct them, were the proposed Industry-house system now established, and the care of the police reposed, with adequate powers, in hands such as those which, with such well-directed zeal, and such unexampled celebrity, we have seen employed in depicturing the existing state of it, habitual depredation might even now be confined within a narrow range.

Section VI. *Existing Law incompetent.*—The Vagrant Act, (17 Geo. II. c. 5.) coupling the unavowed-employment class with the begging class, and with so many other classes, some differently pernicious, some unpernicious, is rendered incompetent to this purpose by the causes that have been seen, and many more beside.—It misdescribes the case—it falls short of it—it overshoots it.—It violates justice, by punishing, as for delinquency, without proof.—A clause in the Police Act, (32 Geo. III.

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* *London Directory—Fashionable Calendar—Birmingham Directory*, &c., *Universal British Directory:* the last, a most copious and extensive work, not yet completed, the object of a patent.

† *What, sir, is your name?—George the Third, your King.—What is your occupation?—My occupation is—to govern you.*—Alfred's law of *decennary* aggregation was an infinitely stronger measure, though so much praised. To notoriety of occupation it added vicarious responsibility, and that to a degree equal to vicarious punishment—punishment without offence.—Its roughness fitted the roughness of the times.

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c. 53.) grafted on the Vagrant Act, of infinitely superior texture, but tainted with the irremediable vice of the original stock, confines itself to a minute and accidental portion of the mischief, and punishes as for *repeated* depredations, without proof of *one*.

Chap. IV. TEMPORARY INDIGENCE RELIEVED. —The best mode of relieving temporary indigence, on the part of the self-maintaining poor, is—not by *donations*, but by *loans*.—Loans preserve unimpaired the spirit of frugality and industry; donations impair it, by leading them to transfer their dependence from their own exertions to those of others. Gratuitous bounty, from the Company to the self-maintaining poor, would be inconsistent with the *self-liberation* principle:—the main pillar of industry and economy. When those who have nothing are not relieved *gratis*, nor on any other terms than that of full payment in the way of work, it would be an inconsistency to afford relief *gratis* to those who have wherewithal to pay for it. Gratuitous bounty is among the shapes which private charity may with propriety assume:—where the expense arises out of a man's own pocket solely, he will naturally be the more attentive to the justice of the claim; when it comes wholly or principally out of the pockets of others, (as it would do if bestowed on the Company's account by the agents of the Company,) profusion has neither sufficient check nor certain bounds.—(See PAUPER SYSTEMS COMPARED.—*Home-provision*.)—By *loans* made at a reduced rate compared with the established terms, the Company might afford an immense mass of substantial and unexceptionable relief, without injury either to their own purse, or to the morals of those whose momentary feelings they relieve. In the instances in which dissipation is promoted by money advanced in the way of *loan*, it would be favoured still more by money *given* without condition of repayment.

The Governor, with the privity of the Chaplain, might be empowered and directed to advance money, either to all persons indiscriminately, or to any particular class or classes meant to be favoured on the ground of the lowness of their wages: the rate of interest, little or not at all greater than what will be sufficient to cover common interest, with the addition of the expense of management, which (with the assistance afforded by the official establishment and the population of the Industry-house) might be very small:—suppose six per cent. per annum in the whole.—To prevent wanton applications, a fee must be taken on admission into the office for the purpose of borrowing, and again on redeeming, say a halfpenny or a farthing each time, the expense of booking and ticketing included. No loans being gratuitous, the fraction due on the score of interest in each account would require in every case to be raised till it amounts to the lowest denomination of coin.* In the case of immoveable property, possession not being sufficient evidence of title, mortgage-conveyance, preceded by scrutiny into the goodness of the title, would necessitate an additional expense. Were a *law clerk* to form a part of the establishment, upon a fixed salary, this might form part of his business; the learning as well as labour of which might be reduced within a narrow compass by *fixed forms*: in which case, for the additional one per cent. the mortgager might be exempted from the expenses of conveyance; which bearing the larger *ratio* to the property the smaller it is, in small properties such as cottages, would eat up a great part of the value of what there is to pledge:—and, the goodness of the title being once ascertained, the money might be advanced to him in small successive sums, as he wanted it, and after repayment readvanced, all without addition to the expense, which on the present plan cannot be done.—This branch of relief would, if exonerated from stamp-duties, require to be confined, in its application to *property*, to value not exceeding a certain sum; and, in its application to *persons*, it might be confined to labourers in husbandry, as, being the class lowest paid, most apt to possess immoveable property in small parcels, and in point of affection most attached to it.

Reasons for supposing that six per cent. with the above fees, would defray the expense.—At *Paris*, under a government establishment, five and a half, and in some cases five, (before the Revolution,) used to defray it: six per cent. defrays it, and with a considerable profit, at *Hamburgh*; where, before this public institution, private pawnbrokers used to exact from sixty to eighty per cent. At Rome and in other parts of Italy, this branch of charity is or used to be administered upon as cheap or cheaper terms.—In a proposed Industry-house, part of the requisites are already provided for other purposes:—a system of management, and a system of book-keeping—presiding local agents, the Governor and Chaplain—a system of general superintendence, the General-Direction Board. Other parts would be furnished at a rate of expense prodigiously below the ordinary *Warehouse-men* and *warehouse-women*, from amongst such of the elder members of the community as would be fit for little else:—*Book-keepers*, from the *apprentice* stock, of which a sufficient number might soon be qualified for so simple a task:—both classes maintained for less than £5 a-year a head, instead of eight or ten times the sum, as under private pawnbrokers:—in the meantime, such of the existing *transferable* stock of *adults* as could write or read, might be distributed for the

* Thus, if a farthing only were lent, and only for a day, a farthing is still the interest that would be paid for it:—of course the least sum a man would ever borrow, would be the largest sum the interest of which would be paid for by a farthing, at the rate of six per cent. per annum, for the time he borrowed it for.

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purpose as far as they would go:—the distinction of the trust, seconded or not by a small addition to their allowance, would render the situation a desirable one. The only considerable expense would be a *warehouse-room*, the central part of which would serve for the *keeper's office*.

Chap. V. FRUGALITY ASSISTED.—Section I. *Exigencies*, operating as *efficient causes*, or *sources of demand*, for funds in store, in the sphere of life in question, viz. that of the self-maintaining poor; particularly the lowest-paid classes, of which the greater part of the population is composed:—with an indication, in each case, of the *form* in which the supply requires to be administered, so as to satisfy the demand.

I. *Exigencies operating as sources of demand.*	I. *Forms of supply correspondent to the demand.*
1. Failure of employment.	1. Income, temporary, during the failure.
2. Sickness—which includes failure of employment in whole or in part, and may create a demand for extra supply besides.	2. Income, temporary, during the sickness.
3. Superannuation.	3. Income, during the remainder of life.
4. Ostentatious burial—(a phantastic, yet generally prevalent demand.)*	4. Capital, for the expense of burial.
5. Child-maintenance-provision—in the event of death or superannuation of the father, before the arrival of the child at the age of complete self-maintenance: also in case of the existence of an extra number of children at once, below the self-maintaining age.	5. Income, during the inability, or inadequate ability, of each child, in respect of self-maintenance.
6. Widow-maintenance-provision—No demand (distinct from child-maintenance provision) till the superannuation of the widow.†	6. Income, during the widow's remainder of life.
7. Marriage-fund provision.‡	7. Capital for furnishing a dwelling-place, &c., and even building one, if there be none to be found.

Section II. *Sources of funds in store*, common to the self-maintaining poor—even the lowest paid classes—1. Difference between customary personal expenditure (of the man) *before* marriage, (in England, nearly equal, generally speaking, to the whole amount of earnings,) and customary personal expenditure (of a man) *after* marriage—the latter equal, at most, to no more than the portion of the earnings remaining after defraying the expenditure of the other members of the family. 2. Difference (if any) between *customary* personal expenditure (on the part of the man) after marriage, and *necessary* personal expenditure (of the man) after the marriage. 3. Difference between *customary* family expenditure (on the part of the rest of the family) after marriage, and *necessary* family expenditure (on

* These four first articles (it should be observed) are common to married and single, and to both sexes.

† These fifth and sixth articles, though peculiar to married persons in respect of the *existence* of the exigency, are almost peculiar to single persons, in respect of the faculty of laying up the *means* of supplying it, (*i. e.* the faculty of saving out of earnings a fund adequate to the purpose,) and for that reason apply almost exclusively to males. Supposing the widow to have lived, in every instance, till the youngest of the children had attained the age and faculty of self-maintenance, and by that time to have arrived at the age of superannuation, child-maintenance-provision and widow-maintenance-provision would both be consolidated, as it were, into one efficient cause of demand, taking place immediately upon the commencement of the widowhood, in the instance of this lowest class, as in that of the superior classes:—and so long as the widow and the children under the age of self-maintenance were all living, whatever provision could be made for the family would naturally require to be managed and administered by the widow, to whom, as the children attained the age and faculty of self-maintenance, the benefit of the saving resulting from this diminution of the burden would naturally accrue. Such accordingly is the form naturally given to the provision made in favour of wives and families, in the classes whose habits are superior to that of ordinary day-labour, and whose income affords a surplus capable of purchasing a provision in this way superior to the style of provision connected with those habits. But, in the day-labouring class, the surpluses being so scanty, whatever supply could be provided would require to be cut down and shaped as closely as possible to the exigency. In the instance of the widow, it would accordingly be to be shaped, not to the *whole* of her remainder of life, but only to the helpless or *superannuation* part of it: and, in the instance of the children, not to an undefined multitude of *contingent* children, and *that* during their respective periods of nonage, but to each *actual* child, and to him or her no longer than to the commencement of the age of self-maintenance, which in *this* class may take place before the period of nonage is half elapsed.

‡ This seventh article (an article peculiar to single persons) applies more particularly to males, by reason of their greater surplus of earnings: the earnings of the stronger sex being (as it should seem) not only absolutely greater, but bearing a greater *ratio* to the necessary expense of maintenance: besides that the faculty of obtaining employment appears to be more assured.

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the part of the rest of the family) after the marriage.—The sum of these differences will give the *possible* amount of savings capable of being laid up in store on the man's side, during celibacy, applicable to the defraying the first cost attending the marriage union, or to the making provision for the several other exigencies above enumerated. Speaking of what is *possible*, this proportion cannot be set down at less than three-fourths of the earnings of a male of the lowest-paid class, reckoning from his arrival at the age of highest earnings (say twenty years.)*

As to the female of this class, though her physical faculty of making earnings, is perhaps by not more than one-third or one-fourth inferior to what it is in the male; yet her opportunities of turning that faculty to advantage, are comparatively so slender and precarious, as scarcely to present a ground for calculation capable of being put upon a level with the above.

Section III. *Difficulty of Hoarding.*—Difficulties which the self-maintaining poor are apt to labour under, in respect to the *laying-up* and *improvement* of their surplus monies.—1. Want of physical means of safe-custody—such as *lock-up* places:—thence, danger of depredation and accidental loss.—Pocket, the only strong box, and that an unsafe one.—2. Difficulty of opposing a never-yielding resistance to the temptations afforded by the instruments of sensual enjoyment, where the means of purchasing them are constantly at hand.—3. Want of the means of obtaining an equivalent, especially on safe terms, for the use of such small sums, either in the shape of interest, or in the shape of a supply, adapted in its form and conditions to any of the several exigencies above-mentioned.—A Bank, instituted for the purpose of supplying this deficiency, might be distinguished by the name of a *frugality-bank*.*—4. Want of a set of instructions and mementos constantly at hand, presenting to view the several *exigencies* or sources of demand for money in store, together with an indication of the most eligible means of making provision for the exigency in each case, by means of a system of banks, supposing it instituted, upon the plan exhibited below.

Section IV. *Properties to be wished for in a System of Frugality-Banks*, commensurate to the whole population of the self-maintaining poor, within a tract of country such as that here in question—viz. South Britain.

1. *Fund, solid and secure*:—proof against the several *causes of failure*, of which below.

2. *Plan of provision, all-comprehensive*:—comprehensive, as far as may be, of all sorts of exigencies, and at all times, as well as of all persons, in the character of customers: thence the amount of the deposit transferable from exigency to exigency, at the will of the customer, at any time.

3. *Scale of dealing commensurate* to the pecuniary faculties of each customer:—*i. e.* on each occasion as large or as small as his convenience can require.

4. *Terms* of dealing sufficiently *advantageous* to the customer: (the more so, of course, the better:) regard being had, in the necessary

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* The average earnings of a male of the above description (*South Britain* taken throughout) can hardly be set down at less than 1s. a-day, (the year throughout,)—6s. by the working week, making, by the working year, £15, 12s.—In the county of *Sutherland*, in *North Britain*, £3:13:5, and no more, is the customary personal expenditure of an unmarried man, according to a statement reported by the Rev. Mr Davies, in his *Case of the Poor*, p. 200: and the sufficiency of the allowance is indubitable, since, according to the same statement, nearly as much is laid up as a fund for *house-keeping* and *marriage:* nothing is set down for *rent*, but then 5s. is set down for *merry-making*, i. e. drinking fermented liquors; and the one, it should seem, may be set against the other. A fourth of £15, 12s. is £3, 18s.,—so that what the Scotchman spends is not so much as one-fourth of what the Englishman earns. What the Scotchman *does* live upon by choice, the Englishman *could* live upon if he chose: for oatmeal and potatoes, (the Scotchman's only food in Sutherland,) do not cost less there (it is supposed) than in England: it seems probable, that, in point of *real* cost, they would even cost least in England; *i. e.* might be raised for less land and labour: though, on the other hand, the rent that must be paid for the land, is probably higher in England than in Sutherland. The excess of expense on the one score, and the deficiency on the other, may perhaps, without much error, be set the one against the other.

At *Glasgow*, indeed, the average customary *personal* expense of a married man of this class is set as high as £4:15:4,—(See Letter to the Citizens of Glasgow:—Glasgow, April 12, 1783: attributed to the Rev. Dr Porteous.)—It is natural that, in and about that great and thriving commercial town, expenses should be higher than in the thinly inhabited county of Sutherland: but I cannot help suspecting that the expenses of the man are here rated rather too high; since, in the same statement, the expenses of the woman are rated at no more than £2:16:4, not much more than half those of the man; and the expenses of an average child, being one of a family of four children, are rated at no more than £1:8:2, not more than half those of the woman, and not much more than a quarter of those of the man.—[As will readily be expected, the circumstances brought to view in this Note have been materially changed since 1797. In Glasgow, labourers' wages and expenditure differ but slightly from those of the same employments in England. By the new Statistical Account of Scotland, it appears that in Sutherland, day labourers' wages average 1s. 3d. per day.—*Ed.*

* Bankers, safe and even unpaid, are not wanting to the rich: without the aid of some special institution, such as that here proposed, such bankers will always be wanting to the poor, especially to the lowest paid, who are the most numerous classes; because a bank, capable of presenting adequate security, could not, on this petty scale, ever find its account in dealing on any such terms.

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degree, to *solidity;* and if views of pecuniary advantage are admitted, allowance made for the quantum of profit necessary to be allowed to the undertakers.

5. *Places* of transacting business *suitable:* adapted in point of *vicinity*, as well as in other respects, to the conveniency of the customer.

6. *Mode* of transacting business *accommodating:* suited to the circumstances of the customer in respect of *times* of receipt and payment, and *quantum* of receipt and payment at each time.

7. *Mode* of operation *prompt:* consuming as little of the customer's time in attendance as may be.

8. *Mode* of *book-keeping*, *clear* and *satisfactory*.

9. *Constitution exempt*, as far as may be, from all *collateral inconveniences*, incident to *association:* a circumstance, in some shape or other, necessary to the voluntary composition of a common fund.

Section V. *Plan for a System of Frugality-Banks*, managed by the *proposed Company*—and possessed of the above properties.—Money to be received from a contributor in any quantities, paying each time a trifle (suppose the smallest coin current) for registration. The benefit granted in the first instance, a benefit adapted to all conditions and circumstances—*viz.* a *superannuation annuity:*—this benefit convertible in the whole, or in any part, into any other species of benefits, at any time, or even capable of being withdrawn in the lump, at the option of the contributor; and so *toties quoties*, on pre-established terms. A contributor to be at liberty to pay in his contribution in small sums, according to his convenience: as soon as it amounts to an even sum of a certain magnitude, (say £1,) credit to be given him for a superannuation annuity to a certain amount, to commence at such age as he chooses; the amount being consequently adapted to the age of commencement, according to a table previously constructed for that purpose: the option being given to him on each occasion, as between the increasing the quantum of the provision already made, or accelerating the commencement of it:—and so for every £1, he contributes, at the same, or any other time.

Example of divers shapes into which contributions might be convertible, at the option of the contributor, at any time, in whole or part.

1. An annuity for an existing wife, in the event of her becoming a man's widow, commencing at *her* age of superannuation, or else at *his* death.

2. In the case of a married man, having or not yet having a child or children, an annuity, during the time that each child, or each child above a certain number, shall continue *under* a certain age, considered as the commencement of complete or partial *self-maintenance*.

3. It might serve as a *pledge* on which he might borrow money of the Company, to supply a demand created by any species of exigency that may chance to present itself: whether it be *regularly accruing*, such as the above, or *purely casual;* and in either case, whether it be of the *afflictive* class, (such as failure of employment, or sickness, as above, or any other of the *causes of impoverishment* as exhibited in the *Table of Cases calling for Relief*,) or of the *lucrative* kind—exigencies constituted by the opportunity, or supposed opportunity, of deriving a positive and extraordinary advantage from the use of a sum thus required. For this he may be made to pay common interest, to cover which the greatest sum lent may be restricted to an amount not quite equal to the amount of his contribution. If, at compound interest, the amount of his debt comes at any time to equal the amount of his contribution, the annuity is thereupon forfeited, but the debt is cancelled. When the money wanted to be borrowed, exceeds the amount of the least portion of purchase-money received—(*viz.* the above-supposed £1)—he may have the option of *selling* instead of *pledging* so many of his elementary annuities as correspond to it: which would be the simpler mode, though, upon calculation, if the lapse of time since the purchase has been considerable, not quite so advantageous.

4. By selling a certain number of these elementary annuities, a man would at any time be able to raise money, to serve as a *marriage fund:*—nor ought such alienation to be accounted bad economy; since, to a bachelor, or a maiden, this nearer and more agreeable object would naturally be the foremost of the two, the other of superannuation being chosen at that early period in no other view than that of securing the money, and placing it out to advantage in the meantime.—The age at which the formation of such a fund may be expected to commence, may be, in males, from sixteen to eighteen or nineteen: when the amount of earnings has got the start of the amount of physical wants, and the youthful eye has begun to turn itself towards the opposite sex. The idea of the attracting object, especially if determinate, will be a never-failing encouragement to perseverence:—contests may come to take place amongst suitors, which shall have given the strongest proof of attachment, by laying up the largest marriage-fund in proportion to his means. The publicity inherent to all transactions in which the Company is a party, will of course (unless otherwise ordered in the present case for special reason) give a correspondent publicity to these exertions of individual virtue:—that the degree of exertion may be indicated, as well as the magnitude of the result, the total amount of the earnings may be in a line with the amount of the savings thus applied: the degree of frugality being thus measured and exhibited, a high degree may become proportionably honourable:—not to be upon the list may even become disreputable. A maiden known to have lovers, may come to take a pride in the magnitude of such their respective sacrifices; and to make a point of honour not to yield her hand till the degree of attachment

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thus demonstrated has risen to a certain pitch.—Frugality, being thus brought forward by desire, as it were in a hot-bed, in the spring of life, will maintain itself without difficulty in the maturer seasons. What has been withdrawn by marriage from the provision for old age, will gradually be restored, and finally with increase. Throughout the circle of domestic expenditure, the *future* will rise in its value in its comparison with the *present*:—in England, perhaps one day as high as in Scotland it appears to stand already: and whatever is taken from the distant future to be given to immediate comfort, will be invested in articles of durable use, rather than lavished upon the short-lived instruments of momentary gratification.

Section IV. *Friendly Society Banks inadequate*:—shown by reference to the above list of properties.*

I. *Solidity*—as against the several causes of failure.—*Causes of failure* to which a frugality-bank stands exposed.—1. Terms too favourable to the customer: the result of want of calculation, ill-constructed calculation, or ill-grounded calculation: the last a cause liable to take place in as far as the accessible stock of *data*, or facts requisite to constitute a proper and sufficient ground, happen to be defective. To all these sources of profusion, the solvency of the Friendly Societies, taken in a mass, appears to stand exposed. For the principles of calculation, they have access indeed, to the works of the respectable authors who have laid the foundation of this branch of traffic: but whether, in each instance, they have taken these authors, or any other competent persons, for their guides in these dangerous and slippery paths, or whether they have taken any guide at all, any other than the over-weaning presumptions of such uninformed individuals to whose guidance the rest of the members may have happened to commit themselves, is a matter which not only had been from the beginning, but after all the attention that has been bestowed upon them by government, still continues a matter of chance. Against so much of the danger as depends upon the want of *data*, it is not in the power of skill to afford any adequate assistance. In the case of superannuation-provision and widow-provision (the two most important of the exigencies for which provision is made by any of these societies) the whole stock of *data* known to exist seems deplorably deficient, nor is the deficiency such as can be supplied without the aid of government.†

* The inadequacy of these institutions, compared as well with what *have* been, as with *might have been* their objects, reflects nothing like imputation upon the members, contrivers, promoters, or patrons, of these truly useful and meritorious associations. They worked, as they had to work, by the existing lights, with the existing materials, in the existing state of things. [By the new system applicable to saving's banks, by the 9 Geo. IV. c. 92, and the 3 and 4 Wm. IV. c. 14, a remedy is applied to several of the defects here noticed, especially in the provisions for vesting the funds in Government Stock. Like improvements have also, to a certain extent, been extended to Friendly Societies. The deficiency of uniform information mentioned in the immediately following note, is now in the course of being supplied by the Registration system established by the 6 and 7 Wm. IV. c. 86.—*Ed.*]

† The set of facts that appear requisite for this purpose are such as, taken together, shall afford a sufficient indication of the rate of vitality or mortality, in the whole, and in each distinguishable part of the territory of South Britain, as diversified by local situation, age, sex, condition in respect of marriage, and occupation. But if *place* differs materially from *place* in healthiness, it is not the rate of mortality in any one place that can afford an adequate indication of the rate of mortality for the whole territory taken together, much less for each separate part of it: if the proportions of mortality, as between *age* and *age* in different places, are materially different, it is not the proportion in any one place that can afford an adequate indication of the proportion for the whole territory together, much less for each separate part of it. If the rate of mortality, all ages taken together, is in all places taken together, or in any particular place, different as between *occupation* and *occupation*, an average rate made out from all occupations taken together will not, in any place, suit the case of him whose occupation is of the healthiest cast, nor of him whose occupation is of the unhealthiest cast. In particular, so great have been the differences observed in the rate of mortality, as between *place* and *place*, that there cannot anywhere be that place, the rate of mortality in which, how accurately soever ascertained, and for whatever length of time, can present any tolerable assurance of its affording an adequate sample of the average or mean rate for the whole territory taken together, much less a sample that shall at once be adequate for the most unhealthy and the most healthy situations—for great towns, and for country places—for marshes, and for mountains.—The rate of mortality employed by Dr Price, and adopted by Mr Morgan, is that which is exhibited by Northampton: and the rate pitched upon by these celebrated calculators, is that which bids the fairest chance for being assumed, at least presents the fairest *claim* to be assumed, by each of the several Friendly Societies, wherever situated. Yet, in Northampton, the number of the living is to the number of annual deaths, (according to Dr Price,) no more than as 26 and a fraction to 1: but, at the same time, in the average of seven places reported by Mr Howlett, (See Howlett on the Poor, 1788, p. 93,) two of them in Suffolk, and five in Glamorganshire, the number of the living was to the number of annual deaths, as 54 and a fraction to 1; in the parish where highest, as 59 one-third to 1:—population of the seven places taken together, about equal to that of Northampton:—the probability of life consequently more than twice as high as in the spot which seems likely to have been taken for a general standard. This is not a place to investigate the consequences of the error, supposing the Northampton standard to be an unsuitable one: but that it gives the rate of vitality—the probability of life—too low for the

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2. Further cause of failure, embezzlement or dissipation: embezzlement in the hands of some unfaithful member, or dissipation by the insolvency of some third person to whom the fund has been lent, for the purpose of obtaining an interest from it.

3. Another cause of failure—dissolution of the society, in consequence of disagreements among the members.—Of the influence manifested by these two last causes among the *Friendly Societies*, examples, but too numerous, are to be found in Eden. How sure a refuge might not they have found in a bank, kept by the proposed Company!

II. *Plan of provision all-comprehensive* and *changeable at the will of the customer*. Under this head the plans of the Friendly Societies appear to be considerably diversified, but where the plan is most comprehensive, it is far from being adequately so: and as to the faculty of transmutation, it is probably without example. The exigency provided against is, in some instances *sickness* alone:—in some, possibly, *superannuation* alone:—in more, probably, *sickness and superannuation* together:—in others, *sickness and widowhood* together:—in others, perhaps, all three:—in some, (perhaps the greater number,) these useful objects are unhappily combined with an ostentatious and expensive *burial*. In no instance does the plan extend to the affording a provision for the expenses of *marriage*—against *failure of employment*, unaccompanied by sickness—or against the temporary burden resulting from an *extra number of children* under the self-maintaining age. In the two first of these instances, the smallness of the fund, in the case of these local associations, is an invincible obstacle to the making provision for the exigency; since, in this line of life more particularly, it is *convenient* to a man at least, that his contribution be received *from* him in any quantities; and in the list of exigencies there are several demands to the satisfaction of which it is *essential* that it be returned to him in any *proportion* and at any *time*, he pleases. But a fund composed altogether of the petty and unincreasable contributions of a small and determinate number of individuals, can leave no such room for individual will to operate: whether the contribution be in the form of a gross sum, or in that of a chain of payments, or in a compound of both forms, no part of it can ever be given back, but in the case of the particular exigency against which it provides: if it be a chain of payments, the chain must

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whole kingdom taken together, may be suspected from the above instances; much more for all country places taken together in contradistinction to towns, and still more for situations above par in point of healthiness: and if there be an error, the amount of it, may, it is evident, be very considerable.—Dr Price (p. 140, 5th edition) proposes a plan for a society, in which superannuation annuities are to be combined with weekly payments during sickness. "If the probabilities of life" (he concludes) "are *lower* among the labouring poor, than among the generality of mankind, this plan will be surer of succeeding:"—meaning, by *succeeding*, not the formation of the bank, but the preservation of its solvency. This is as much as to say, that if, in any place, the probabilities of life are *higher* among the labouring poor, than among the "generality of mankind," (*i. e.* persons of all classes taken together,) at Northampton, this same plan will in such place be so much the surer of *not* succeeding. But in the seven places above-mentioned, the probabilities of life, taking the whole population together, are, as we have seen, more than twice as high as at his standard place, *Northampton*. What effect an error to this amount, viz. upwards of cent. per cent. (and which certainly is not by a great deal the greatest to be found) in the general rate of mortality, may have upon the solvency of a bank of the kind in question, is what I have not taken upon me to investigate:—not so great I suspect as upon this statement it may be apt to appear:—but what we cannot at least avoid suspecting is, that, according to the Doctor's own notions, a society for the purpose in question, instituted upon his plan, in any of the above, or any other of the situations in which the probability of life is from twice to thrice as great as in this his standard place, would be little less than sure of *not* succeeding. In these seven places, it is true, the whole population of all ranks is comprised:—but so is it at Northampton:—and *as* the labouring poor alone are to the whole population in the one case, *so* are they, probably, with little or no difference in the other: and since in all places the labouring poor constitute the great bulk of the population, the difference between the rate of mortality among the sum total of the labouring poor, and the rate among the sum total of the population, cannot, in any place, be very great.—In the case of provision for a widow, by annuity, commencing at widowhood, the commencement of the burden upon the fund being not only distant, as in case of superannuation annuities, but subject to contingency upon contingency, self-partial hope has so much the wider field to range in. Of the several widow-provision banks which had been opened before the entrance of Dr Price into this field of inquiry, such as had arrived at the trying period of their existence, had all been broken up through the experienced insufficiency of their fund, and the rest have been broken up since by the assurance of the future insufficiency of it, as demonstrated by Dr Price; though constituted by societies of a magnitude in many instances much superior to any that appears to be common or even to have an example among what are termed the *Friendly Societies*. (See the histories of these failures in Dale and Price.) The protraction of the solvency of a bank of this kind too advantageous to the customer to be secure, depends upon the influx of succeeding customers: if the influx continues copious and steady enough, the original members, by their representatives, reap the benefit of the deception: if the influx fails at a certain period, the deception recoils upon the authors. Of the societies instituted for securing a provision for old age, a great part, perhaps the greatest part, appear *now* to be exposed to the same danger:—the sufferers in those *past* instances amounted to hundreds; the predestined sufferers in these *future* instances may amount already to myriads.

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continue unbroken, and the links undiminished, or all security is at an end.

But great as is the mass of population thus provided for in the whole, it is still not near so great as it might be, if the comprehensiveness of the scheme, in regard to persons, were not reduced by a variety of conditions, limitations, exceptions, and exclusions: some direct and intentional; others, indirect and unthought of. The members being to pass more or less of their time in company with each other, they must not be *unacceptable* to each other; hence acception of persons, and occasional rejection of individuals. In some places, community of *occupation* is regarded as a necessary bond of union; in that case the benefit is confined to a few of the most populous occupations. Differences resulting from sex, religion, party, and a variety of other sources, add to the causes by which not only scattered individuals, but whole majorities are excluded: for if forty are necessary to make up a society, and out of the only forty whom the vicinity would have afforded, a single one stands excluded, the exclusion envelops in effect the other thirty-nine.—Among the unperceived, or at least undesigned causes of exclusion, may be reckoned the comprehending under one association objects which in this point of view are repugnant to each other: an individual who with reference to one of these objects would be an acceptable associate, being an unacceptable one with reference to another. Thus a man, who by reason of occupation or constitution is regarded as a *bad life*, would not on that account be a member the less acceptable, but the more acceptable, to a society confining itself in its object to provision for *old age*. As it happens, the only society within his reach, is a society which to that remote object, adds the immediate one of a provision *during sickness*. But the same cause which brings death near, is apt enough to render sickness habitually frequent. Apprehension of a man's adding to the immediate burden, occasions him to be regarded as a dangerous associate, and he thence becomes excluded from taking his chance for the more distant benefit, for which he would have been an acceptable co-adventurer, had he stood alone. When provision for *widows*, to commence with the death of the husband, is confined with provision for old age, in the shape of a superannuation annuity payable to the man, the case may be much the same. To a society confined in its object to provision for old age, an unhealthy man would appear a valuable member, on account of the apparent improbability of his ever reaching that age: but the only society situate within his reach happens to unite both objects, and the apparent goodness of his wife's life, when coupled with his own unhealthiness, more than compensates the advantage promised by the apparent badness of his own life. The two benefits not being to be purchased but in conjunction, he thence becomes debarred from both, by his unacceptableness with reference to one.*

III. *Scale of dealing accommodated to the po-*

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* *Comparative view of Sickness-provision, Superannuation-provision, and Widow-provision plans, in respect of the* requisites *for their being conducted with advantage, and their fitness for being included in* one *contract.*

I. *Sickness-Provision.*	II. *Superannuation-Provision.*	III. *Widow-Provision.*
1. Requires but a *small fund*:—but that always at command.	1. Requires a *large fund*: but which, as to the capital or principal, need never be at command.	1. Requires a *large fund*: but which as to the capital or principal, need never be at command.
2. Requires *no* stock of *data*, upon a national scale, as grounds for calculation.	2. Requires a *copious* stock of *data*, upon a national scale, as grounds for calculation.	2. Requires a *copious* stock of *data*, upon a national scale, as grounds for calculation.
3. Requires a *strict scrutiny* into a man's condition in point of *health*, as a qualification for admittance.	3. Requires *no scrutiny* as to condition in point of *health*, as a qualification for admittance; the more unhealthy, the more beneficial a member, because the less likely to attain the superannuation age.	3. Requires a *strict scrutiny* into a man's condition in point of *health*, as a qualification for admittance: more so than in case of sickness-provision, on account of the superior magnitude of the stake.
4. Requires (besides a scrutiny into healthiness previously to admission) a *scrutiny* of the utmost *strictness* into the *title* to the receipt of the *benefit*, upon *each* occasion—stricter than can well be expected on the part of the managers of a fund instituted for any other purpose.	4. Requires *no other scrutiny* into the *title* to the receipt of the benefit than what concerns the *time* of the party's *birth*:—a fact of the simplest nature, and ascertainable at a period *previous* to that of the contract of admission.	4. Requires *not* a scrutiny of any nicety: after the scrutiny into health previous to admission, the only *subsequent* objects of inquiry being matters of fact of a nature little exposed to dispute—viz. the celebration of marriage between two persons, and the death of one of them.
5. Will have the *better* chance of being *well conducted*, the *smaller* the society: since, the smaller	5. Its chance of being *well conducted* has *no* connexion with the magnitude of the society: but it	5. Its chance of being *well conducted* has *no* connexion with the magnitude of the society: but it

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cuniary faculties of each customer. This property is scarcely possessed, or so much as capable of being possessed by a Friendly Society bank: not only the original calculations, but the current accounts, would be too complicated for any literary talents, or at least too operose for any time, which such an association could in general be expected to afford. The contribution is paid at so much per week, or per month, the same for each contributor, though in some instances the amount of the earnings from whence it is drawn may be some number of times greater than in others. In general, compared to earnings, the amount of it appears to be very small; from 3d. to 1s. a-week, where the earnings may run from 6s. to 36s. or more: so that frugality, though invited to raise itself to this low pitch, is in a manner kept from rising higher: its claims having been acceded to up to this standard height, will be apt to be looked upon as satisfied: and thus a man who might by possibility lay up above £90 a year, and with comfort and decency £70 or £80 is supposed to have done enough when he has laid up two and fifty shillings.—On the other hand, small as the contribution is, it may yet be too much for an individual already burdened with a numerous family, and belonging to the lowest-paid class; hence another source of unobserved exclusions: though, for the same individual, *before* marriage, a contribution some number of times greater might not have been too great.

IV. *Terms of dealing sufficiently advantageous to the customer.* This property *antagonizes* with, and forms the limit of, the more important property of *solidity:* due provision being made for that superior object, then and not till then, the more advantageous the terms can be made the better. As to the Friendly Societies, it is not natural that they should be found deficient under this head:—the danger is (as we have seen) that of their promising *more* than they will be able to pay, rather than not so much. The mischief resulting from want of calculation, ill-constructed calculation, or ill-grounded calculation, vibrates between these two dangers:—in one place *too* much is allowed in return for contribution, and there bankruptcy is the consequence: in another, *not* so much as might have been allowed, and there a proportionable part of the benefit is lost.—The scale of variation being so great, stretching from below twenty to one, to above sixty to one, the co-existence of these two opposite mischiefs seems an inevitable result of the assumption of a common standard for all places, even though that standard were the exact representative of the *national* rate. In the case of a *national* Frugality-Bank, such as that proposed, if the standard be but just, both mischiefs are completely obviated.*

V. VI. VII. Place of transacting business suitable in other points, as well as that of vicinity—Mode of transacting business *prompt*, as well as *accommodating*, in regard to times and quantities of receipts and payments. Among the Friendly Societies, with few, or perhaps no exceptions, the office of this sort of the Frugality-Bank is at a *public-house:* for here it must be, or nowhere; this being the only sort of house to which it is convenient to be thus employed: at the same time, if there were any option in the case, choosing a tippling-house for a school of frugality, would be like choosing a brothel for a school of continence. The sacrifice a man is enabled to make to that virtue is small and limited: the sacrifice he is perpetually solicited to make to a habit which is the most formidable adversary of this virtue, has no bounds. The obligation (commonly annexed) of spending at this office not less than a certain quantity of money, (perhaps 3d.) for every shilling saved, as well as a certain quantity of time, (an evening in every month, or every week,) would be a very heavy tax on the contribution to frugality, if the contribution itself were not so slight in proportion to the means; and if, either already, or in consequence of a man's admission into the society, the tax were not so unhappily habitual and congenial to inclination, as to present itself as if divested of all its burdensomeness. Be this as it may, here comes in another addition to the list of unperceived exclusions; since, whatever may be the benefit, no man is admitted to the purchase of it, who will not frequent an alehouse.

As to *vicinity*, the associations in question are thus far exempt from disadvantage on that

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the society, the greater the interest which prompts to scrutiny.

6. A bank for this purpose may be broken up *at any time*, without any breach of *engagement*, and without prejudice to the effectuation of the object, so long as it lasts.

will be the securer against insolvency through *casual* excess of mortality, the larger the society.

6. A bank for this purpose can *never* be broken up, without breach of engagements, or without the utter frustration of its object.

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* Superannuation age, suppose sixty-five: age of commencement of contribution, from twenty to thirty:—if none live beyond sixty-five, the fund will go on accumulating for ever; and if all were to live up to sixty-five, it would accumulate but so much the faster:—on the other hand, if all die within a few years after they have begun contributing, except those who live beyond sixty-five, and they live on to eighty or ninety, the insolvency, under a plan of calculation grounded on an average of ages, and a supposed regular scale of mortality, as between age and age, will be certain and enormous.

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score, that the members, in their quality of bankers, are in every such society sufficiently within reach of one another, in their quality of customers to the bank: but this circumstance is in effect but another cause of exclusion, under the mask of a convenience; since, in as far as this condition fails, the society fails of extending itself. At the same time, it may be owing, in no small degree, to the difficulty of collecting together members within reach of one another, (that is, within reach of the common office, the public-house,) in number sufficient to form a society for this purpose, and capable of sparing the necessary proportion of the working time, that the benefit, such as it is, is mostly confined to towns.

As to the *times* for receiving contributions, and paying allowances, these are points that, in the instance of these societies, must be fixed by general regulation, and in respect of which little or no indulgence can accordingly be shown to individual convenience. The contribution must be so much a week, or so much a month: less cannot be accepted, for no further advantage can be allowed:—the time must be the periodical time of meeting, and no other.

As to the Company's system of Frugality-Banks, in point of mere vicinity, if confined to the system of Industry-houses, they certainly would be in no small degree inferior to the system of public houses which officiate in that capacity to the existing societies: but even were no further accommodation provided, the advantages it would have in those other respects seem to be more than an adequate compensation for this head of disadvantage. No tax,—no obligation to drink;—neither obligation nor invitation to rob the domestic circle of a regularly recurring evening. Ten miles, the utmost distance:—times more or less frequent, governed altogether by individual convenience:—the time consumed by the augmentation of distance might, in many instances, be made up for by the diminution in the number of attendances; and the time of the week might be the day (for wherefore should it not be?) on which time, considered in a pecuniary light, has no value.

Should this not be enough, the vestry-room of each place of worship presents an office as near, and the clerk an officer, or sub-agent, as suitable as can be desired. The minister and churchwardens would be his natural inspectors. In a place in which he is already stationed by his existing and more important duties, the smallest coin current, multiplied by the number of members, and that by the number of times of payment, in the instance of each, would afford a compensation more than adequate to his trouble. For the service thus rendered to morality, religion need not go unrewarded: attendance on the service of the day might be a condition precedent, and its *offices* rendered preparatory, to the exercise of this virtue. Money transactions are neither ill-suited nor foreign to the main business of the day, when sanctified by the *occasion*, or the *use*: witness surplice-fees, communion offerings, collections on briefs:—and if a money transaction be sanctified by charity, why not by a virtue which stands paramount to charity herself, by preventing the mischief for which her best exertions are but a palliative.

VIII. *Mode of Book-keeping clear and satisfactory.*—In the instance of the existing societies, the provision made in favour of frugality being so inadequate, the plan of book-keeping necessary will be proportionably simple: and indeed so simple, that the stock of literary acquirements existing in each society does not, it is true, appear likely to be found in many instances inadequate to the task. But the proposed Company, in their quality of keepers of a universal frugality-bank, would not extend their scheme of provision without providing a system of book-keeping altogether competent to the purpose. Under their management, that degree of competency, which at present is exposed everywhere to contingencies, would be certain and universal.

IX. *Exemption from collateral Inconveniences.*—Collateral mischiefs, to which the management of the Friendly Societies is liable to give birth, (as appears by examples from Eden,) and from all which, by the management of the proposed Company, the business would be cleared: 1. *Drunkenness* and *Dissipation*, as above. 2. *Disagreements* and *quarrels*—results mischievous to themselves, besides operating occasionally in quality of causes of *dissolution*, as above. 3. Combinations for sinister purposes, of a *professional* or other comparatively *private* nature:—such as rise of wages, (always in favour of occupations already overpaid,) or diminution of working hours.* 4. Combinations for sinister purposes of a *public* nature—the raging malady of the times.

Section VII. *Exigencies to which the Company's Bank is least competent.*—These are such, and such only, in which the result of the largeness of the society may be the danger of its not defending itself, with sufficient vigilance, against the arts of customers: the interest of each associate, in each transaction, decreasing as the multitude of associates increases.

Among these cases would evidently be to be found those of simple failure of employment, sickness, and provision for widows, on the supposition that, in return for the consideration-money received, the burden to an unlimited amount—to a value not limited by that of the consideration-money in each instance—is to be borne by the Company—1. As to *failure of employment*, the exigency itself is so absolutely dependent on the will of the customer, as to be palpably unsusceptible

* Combinations of this tendency, and of the most pernicious kind, are said to exist among the societies composed of *London servants*.

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of being insured against on such terms. To a man who *has* an employment, which fills up his time, and affords him the means of living, it will not commonly be a very easy matter to *appear* to have none: but there is no man who could not so manage matters as *not* to have any such employment. 2. Sickness indeed is not altogether in this case; but it is too much so to be capable of being provided against upon these terms, by so large a company, without an evident danger of incalculable loss. 3. Even in the case of provision for widows, though the *event* from which the *actual* commencement of the burden takes its date, is *not* to be considered as being (as in the former cases) dependent upon the will of the customer; yet the knowledge of the matter of fact, in regard to constitution, occupation, &c., on which the probable duration of life depends, and thence on which the terms of the contract, or even the reception of a candidate, in his proffered quality of customer, may be made to depend—and therefore, in this way, the *probable* commencement of the burden, in each instance, *are* in no small degree dependent on his will.* Against the danger here in question, in the case of provision against sickness, there seems to be but one remedy, viz. the calling in the aid of the *duty-and-interest junction* principle, and taking for sharers in the bargain some individual, or small assemblage of individuals, whose personal interest in the event of each bargain shall be adequate to the purpose:—in the case of provision for widows, there is, besides the above remedy, that of reducing the burden of the allowance to a rate adjusted to the supposed utmost efficacy of the cause of disadvantage, and for that purpose supposing the lives of husbands (among the customers of the bank) to be as much worse than ordinary, and that of wives as much better than ordinary, as the purpose shall be found to require. If the latter remedy be not employed, there remains still unprovided against, in the case of this mode of provision for widows, the danger of a sinister and secret interest, on the part of the agent, strong enough to overcome the known and legitimate interest by which his fidelity is endeavoured to be insured; and, upon the whole, these are the branches of the trade of assurance which appear the least adapted of any to the constitution of the proposed Company. In the case of a provision for widows in no other shape than that of a superannuation-annuity, as the commencement of the burden depends—not (as before) upon the *badness* of the life of the *man*, but upon the *goodness* of the life of the *woman*, the danger of imposition has no place. This, as well as every other case of a superannuation-annuity, is as competent to the constitution of the Company as any branch of assurance can be: and as competent to the constitution of the proposed Company, as to any other Company, existing or proposable:—and this is the only shape in which provision for widows is adapted to the situation of the lowest-paid classes, that is, to the bulk of self-maintaining hands: for surely it is not a matter even to be wished for, that a woman who during her husband's life has been subjected to labour, should be raised above it by his death.

In those cases to which the Company's management is applicable with least advantage, it is not that this management is less competent to the enabling an individual to make provision for the *exigency*, but only as to the making provision against it in a particular *mode*—viz. in the way of insurance:—for, to a party

* Child-maintenance provision, where the demand for it results from the co-existence of an extra number of children under the self-maintaining age, is an exigency not altogether incapable of being thus provided for on its own bottom, and even in the way of insurance. For however the *reducing* the amount of the exigency below any given amount may, physically speaking, not be out of the power of the parties, (such a result being attainable by abstinences repugnant to the object of the institution,) yet the *increasing* the amount of the exigency, that is, the number of the children produced by any given marriage, is a result not subject to the will of the individual, as marriage itself, apparent idleness, or apparent failure of employment are. Whatever were the chance, in respect of the co-existent number of burdensome children found to obtain at *any* period, might therefore be safely taken as the *permanent* amount of the chance; since no other cause than the desirable event of a general increase in the national rate of vitality could occasion it to be exceeded. But the calculations would be complicated; and the stock of *data* requisite in the capacity of grounds for calculation is such, as is not to be obtained without the aid of government: inasmuch as a complete enumeration of the whole population would be absolutely indispensable; and when once made, it were better, for this as well as so many other purposes, that it should be regularly kept up. At any rate the sale of annuities co-enduring with this exigency, would, it is evident, be a business of too much complication and delicacy, and would require funds of too great a magnitude, to lie within the sphere of ability of any of the local associations. But by the proposed Company, (supposing the *data* to be but obtained,) it might be conducted with perfect safety and regularity, to the great advantage of the industrious and frugal individual, as also of the Company, if the company thought fit to take a share in it.

Among the cluster of donations, proposed with too little thought of the ways and means, and among the least exceptionable in its principle, was that of a gratuitous allowance for extra-children altogether at the public charge. A bounty to a more supportable amount, upon that same principle, might be afforded, by enabling the Company, at the public expense, to insure a family against the burden for a premium in such proportion inferior to what would be an equivalent, as should be thought fit. But whether this expensive mode of affording relief would be preferable to the unexpensive mode of administering it by the taking of extra-children upon the footing of Company's apprentices, the reader is by this time in a condition to judge.

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who is content to be his own insurer, the Company's bank, (as we have seen,) holds out against this, as well as so many other exigencies, a provision not to be derived from any other source. If a man has *time* before-hand, it enables him to lay up a fund of self-relief, by means of which he may be provided for in his own way, at his own time:—if, for want of time, or otherwise, he has laid up no such fund, at the worst it provides for him, on the self-liberation plan, in an industry-house. Compared with self-insurance, insurance by contract, as in other cases, so, more particularly in this, seems, it is true, most favourable to happiness upon the whole: the distribution of good and evil being in this way more equable:—for though what there is of personal suffering in the case is incapable of being distributed, yet its concomitant, the pecuniary burden, *is* distributed by this means; and, by being distributed, the pressure of it upon the whole is lessened:—and the strength given by exercise to the benevolent affections, and to the habit of beneficence, is a kind of indirect advantage, which, in a moral point of view, is not to be contemned. To this mode of provision, the Company, though it were not itself to embark in the adventurous part, might afford very considerable encouragement and assistance. By undertaking, in terms attended with no risk to itself, but with a moderate advantage, the receipt of contributions, the payment of allowances, and the charge of book-keeping, the Company would ease the associations of all danger and apprehension of *embezzlement* and *dissipation:* it might release them of a great part of the burden of *attendance*, and exempt them from the dangers of *discord* and *dissolution*. It would contribute, in a great variety of ways, to increase the amount of the population thus associated: it might reduce the number necessary to the forming an association, by taking for itself (which it might do without danger) a certain proportion of the shares;—as far as ten (suppose) out of forty;—by enabling those to form a common *purse*, who, by reason of any of the causes of separation above spoken of—(as, religion, party, private disagreement, and the like)—might have been prevented from forming a common *assembly:*—in a word, it might remove, almost without exception, the various causes of *latent exclusion* above exemplified or alluded to.

So in the case of associations bound for annuities to commence at widowhood—the Company might perhaps not think it advisable ever to contract any obligation of that sort on its own account:—at any rate it could never pledge itself for the discharge of obligations already contracted on this score of existing associations:—but it might take their funds into its own hands, keep account of the produce, and undertake for the discharge of the engagements, as far as that produce extended, and no further.

The benefit that has resulted from these associations is as important as it is extensive: the principle of frugality being rendered popular, the foundation is laid, the chief difficulty removed. What regards relief under sickness is unmixed good:—thousands and tens of thousands must have been preserved by it from death, misery, and pensioned idleness.—But, of what concerns provision against distant contingencies, the result is in the clouds. It is in vain to inquire into remote effects, when the state even of existing causes is wrapt in darkness. Who can say to what extravagancies overweaning hope may not have soared, while unlettered minds have been left to wander in the field of calculation without a guide?—Take even the oldest of these bodies, the past prosperity, were it ever so universal, can scarce as yet have afforded any pledge of future. The oldest cannot as yet have reached the age of trial.* Meantime, safe or unsafe, how little they have done or can do towards satisfying the demands of frugality in their fullest extent, and in all their diversity of shape, has been already seen. The body of collateral mischief of which they may prove pregnant, appears not to be inconsiderable.† But whatever there may be of danger in the institution, results from circumstances that are altogether accidental to it—the multitudinous and unbridled concourse of rough and uncultivated minds:—democracy is no more of the essence of frugality, than it is of prudence, tranquillity, or science. The benefits result from the object itself, the disposition to frugality: the mischiefs, from the means which chance has hitherto furnished for the exercise of that virtue. Under the management of the proposed Company, the mischiefs would drop off of course: the benefit would remain—with vast increase of magnitude, and in its most perfect purity.

Were the disadvantages attached to these petty Frugality Banks, as compared with the proposed General Frugality Bank, ever so considerable, it does not follow that it would be abstractedly useful, any more than honestly practicable, to employ the hand of government

* Concerning the age of trial, see Dale and Price.

† Whatever may be the amount of this collateral mischief, nothing of imprudence or oversight can, with justice, be laid on this account to the score of government. Government did not make these societies, it found them ready made. By the special protection it holds out to them, it has afforded itself its surest chance for their attachment, as well as a peculiar title to their allegiance. After all, what it gives as a boon to this privileged part of its subjects in the shape of a reward for virtue, is no more than what government owes as a debt to all subjects without distinction—*accessible justice* and *liberty of residence:* the last, a blessing, the loss of which, the baneful fruit of the existing poor laws, is a misfortune peculiar to this land of otherwise so justly boasted liberty: a blessing which, by the proposed plan, and by nothing but the proposed plan, would effectually be restored.

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to break them up. The Company's General Bank being added, and these particular banks remaining as they are, the customer, in this, as in most cases, could not but be a gainer by the competition. Whatever part of this business they chose should be done for them by the Company's Bank, it would always be ready to do for them on pre-adjusted terms: whatever part they either found they could not do or conceived that the Company would do for them better than they could do for themselves, they would of course give the doing of it to the Company: and if, in any instance, the result of their choosing to do their own business, instead of turning it over to the Company, should be its being ill done, they could only have themselves to thank for it. The cases in which it is not better for a man to suffer by his own will, than to be saved against his will, are neither many, nor very easy to determine. In every shape in which assistance could be wished —instruction—legal powers—pecuniary funds —trust-worthy hands—the Company, with its all-comprehensive and omnipresent Bank, would never cease to hold out to them a sure and inexhaustible resource.

Chap. VI. *Pecuniary Remittance facilitated to the Poor.*—Disadvantage the poorest and most numerous classes labour under, in this respect, the *relative* of expense of remittance increasing as the sum to be remitted decreases. A considerable proportion of the self-maintaining poor of this country are stationed habitually at a distance from their dearest connexions. In this humble line of life, so small a sum as a crown, or half-crown, might be no inconsiderable assistance—from a parent to a child—from a child to an infirm parent, or grand-parent—from a sister to a sister, &c.—There are individuals in this country, to whose expenditure £500 does not bear so great a proportion as half-a-crown does to the expenditure of many an individual among the self-maintaining poor.—Useful arrangements taken by the post-office relative to this head, since the first penning of this paper.* But these arrangements do not altogether come up to the present purpose: neither the least sum nor the retribution being quite small enough: nor does the post, in all places, reach the cottage of the poor.† This part of the business of remittance might be managed by the assistance of the Company, in and from the several industry-houses, for the benefit of the lowest paid classes, with proper checks, (such as the letters being sent open, &c.) to save the benefit from being usurped by those who have no need of it. The accommodation will of course be the more valuable, the more frequent and regular the intercourse between the several industry-houses and the parishes within their respective circuits. By the use proposed to be made of each vestry-room in the quality of a sub-office to the proposed system of *Frugality Banks*, the demand for this intercourse would naturally be increased. Leaving other days to casual opportunity, Sunday, the day of universal leisure and social intercourse among the poor, might be a day of regular communication, between each industry-house and the several parishes within its circuit. Special messengers would seldom be necessary. The visits which the inhabitants of each industry-house would of their own accord be making to their friends in the respective parishes, would in general, be sufficient for executing these and such other commissions as there might be occasion to give them from the house.—For the facilities that might be given to conveyance, see the next chapter.

Chap. VII. *Distant Conveyance facilitated to the Poor.*—Use of the industry-houses in the capacity of *frugality-inns* and *frugal-conveyance-stages.*—Mean distance from house to house, on one supposition, fifteen miles; on another, but ten miles and two-thirds. Inns are altogether unnecessary, where, comparing the distance between house and house, with the ability of the traveller in respect of self-conveyance, he can make his way from house to house without stopping for a night's rest. But houses for stopping at in the day time are not necessary to the poor traveller. Repose he finds, at the worst, upon the ground; food he carries in his pocket, from the industry-house where he slept. The cheapest beasts of draught (asses) might be kept, at a small expense, in sufficient number for those who by childhood or infirmity were disqualified for self-conveyance.

I. *Uses in the Instance of the Industry-house Poor.*—1. The *transferable* classes distributed all over the country without expense, wherever food is cheapest, or labour, such as they have respectively to bestow, most in demand. 2. A pauper, on his becoming burdensome, conveyed from his last abode to one of the nearest industry-houses without charge; sufficient conductors, where requisite, being always to be found among the population of the house.

* By a regulation of very recent date, the intervention of the different classes of officers, which Government, for other purposes, has occasion to station, in spots more numerous than those of the proposed industry-houses, (though still not so numerous as the parishes,) have been employed for the purpose of enabling seamen in the king's service to correspond, in the way of pecuniary remittance, with their families, wherever situated. The benefit of this arrangement is beyond calculation: —morality, as well as convenience, is served by it: —many a family, which used to be a burden to the public, derives now its nourishment from the natural source; and no inconsiderable portion of national wealth, which used to be worse than thrown away, is now applied to purposes of real and necessary use.

† Defects in the post-office arrangement have, in this respect, during the present year, (1841,) and the immediately preceding, been materially amended by reducing the rate of commission.—*Ed.*

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3. A well-behaved pauper, on his petition, conveyed, by indulgence of the Company, to the abode, or to the industry-house nearest to the abode, of any of his near connexions, whom he wishes to visit, though it were at the remotest part of South Britain. If able, no loss, for want of his labour, need be incurred. Ten, or even fifteen miles a-day, would scarcely make too large an addition to his ordinary day's labour, even if it were of the hard-work kind; none at all, if it were of the *sitting* work, or other *slight*-work kind. When not employed for travelling, as above, the asses, attached to proper vehicles, might serve for giving open air, in conjunction with exercise, to the children beneath the self-conveying age, and to the bedridden—especially on Sundays.—(See Book iv. Pauper Comforts.)

II. *Use to the self-maintaining Poor*—Travelling all over the country, wherever their occasions lead them;—setting out without money, and arriving with money in their pockets.* At present this cannot be done, because there is nobody in a condition to give employment at such *short warning*, in large or small *quantities*, as it may happen, to persons *unknown*, coming in any *number*. A man, having money in his pocket, might work or not work, as he chose:—taking the benefit of the diet and lodging at the cheap price of the house, instead of using a public-house, under the obligation of paying for expensive food and liquors. Domestic ties would be strengthened, and social affections cherished, by laying open, in this way, to the poor, those opportunities of occasional intercourse and uninterrupted sympathy, which at present are monopolized by affluence.

Persons *under engagement* to, or in relation to whom this accommodation might be particularly convenient—1. Soldiers; 2. Militiamen; 3. Seamen; 4. Marines:—on furlough, or when disbanded:—and with or without their children.—No expense to the public—no scandal of begging—no danger of stealing or robbing, on pretence of begging.

III. *Persons not under Engagement.*—1. and 2. Welsh and Irish harvesters, periodically visiting—3. Settlers and employment-seekers from Scotland—4. Accepters of offers of employment in the several branches of industry, to and from every part of England, as advertised in the Company's Employment-Gazette—(See Ch. i.)—So many industry-houses as a man were thus led to visit, so many establishments, alike prepared, in the capacity of *frugality-banks* and *remittance-offices*, to enable him to lay up, improve, or remit, whatever savings he may have made.—(See Ch. v. and vi.)

IV. *Confined Hands—Persons travelling in Custody.*—1. *Suspected* hands, arrested, and to be passed, on mesne process, or in execution. 2. *Delinquents*, by delinquencies of an inferior class, arrested, and to be passed, on mesne process, or in execution. 3. *Debtors*, arrested, and to be passed, on mesne process, or in execution:—the debtor having the option to bait at an industry-house, or at a public-house:—an important saving to poor debtors, and thence to their poor creditors:—each industry-house containing a *strong ward*, with provision for appropriate *separation* and *aggregation*, carried to the utmost extent, (see Book ii. Ch. ii.) and capable of affording assistance, upon occasion, to constables and bailiffs. Thus would be superseded the necessity of *irons* for suspected hands, and the expense of occasional extra guards for confined hands of all classes. Debts *would* thus be payable by industry-houses, though not by *prisons*.—See the ensuing chapter.

Chap. VIII. *Imprisonment rendered inexpensive and reformative.*—Efficient causes of *corruption*—1. Idleness (*i. e.* want of *honest* occupation.) 2. Corruptive aggregation. 3. Exemption from tutelary inspection. 4. Access to the means of intoxication.—Efficient causes of *reformation*, the reverse of the above. 1. Industry (*i. e.* honest and profit-yielding occupation.) 2. Tutelary as well as innoxious aggregation. 3. Constant tutelary inspection. 4. Seclusion from the means of intoxication.—The *presence* of all these causes of corruption is of the essence of a prison: a few of the lately improved prisons excepted, where an imperfect dose of the efficient causes of reformation, (viz. industry, absence of corruptive aggregation, and seclusion from the means of intoxication, but without tutelary aggregation, or constant inspection,) is purchased, by means of separate lodgment, and thence at an enormous price. The perfect *absence* of all the efficient causes of *corruption*, the perfect *presence* of all the efficient causes of *reformation*—is equally of the essence of a proposed industry-house.† None of these requisites of a prison (except confinement) are to be found in *any* ordinary prison: all of them would be to be found in *every* industry-house. Practical consequence—common prisons ought to be extirpated as common nuisances: and their function supplied by a

* Expense of a day's maintenance for a man, not so much as 4d.;—but say 6d.:—worth of day's work, not so little as 1s.:—a quarter of each day expended in travelling from house to house;—this would leave three-quarters of a day to work in, and earn 9d.—At this rate, a poor *man* might work his way on from house to house, any number of days together, without intermission, putting 3d. a day into his pocket to his journey's end, instead of being at any expense.—In the case of a *woman*, expense 3d.;—but say 4d.:—day's earnings, 8d.:—three-quarters ditto, 6d.:—money in pocket each day, 2d.

† Unceasing inspection, conjoined with appropriate separation and aggregation, does whatever good solitary confinement can do—does what it can *not* do—can be continued for any length of *time* without mischief—and is free from the unsurmountable objections to which the latter is exposed, under the head of expense.—Solitary confinement, like mercury, is good, not for diet, but for medicine.

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strong ward in each of the proposed industry-houses. An industry-house would need no Howard—no Paul—no Pitt.—Every man might be a Howard without danger, difficulty, trouble, or merit. Any man by looking at the Company's Journal might know incomparably more of *every* industry-house, the prisoner-part of its inhabitants included, than Howard could ever know of *any* prison: the passing moment filled the measure of his knowledge.—Terror and safe custody are the only purposes answered at present by the use of ordinary prisons: those securities being indispensable, prisons of some sort or other must still be employed, though corruption, instead of reformation, be the price paid for the advantage. Some men must be sent there, or the fear of being sent there would not find its way into the bosoms of the rest. Prisons *are* what they are, because they *have been* what they are: when prisons were first built, not an idea of the system of *antiseptics* here exhibited had ever presented itself to view.

In process of time the whole system of imprisonment might be undertaken by the Company, to the universal advantage of all parties interested.—Debtors and delinquents from the higher lines of life, are the only classes of prisoners who could not be accommodated to advantage in a proposed industry-house, without additions for the purpose.

Precedent debts, due to creditors at large, might as well be worked out upon the *self-liberation* plan, as debts due to the Company for sickness-relief administered in advance.*

Chap. IX. *Domestic Morality enforced.*—At present, unless the disease be violent indeed, imprisonment, the only remedy, (besides being mostly placed out of reach by the expenses, natural and artificial, of procedure,) being but an aggravation of the disease, domestic disorders, are, as it were, without remedy. A fit remedy would, for the first time, be brought into existence by the proposed industry-houses.

I. Classes to whom an industry-house might be of use in the capacity of a *reformation-house*—1. Bad apprentices—at the instance of the master.—2. Bad children—at the instance of the father or guardian.—3. Bad wives—at the instance of the husband.—At the instance of the father, by the mere parental authority—in the other cases, by adjudication of one or two magistrates.

II. Conversely, it might be little less useful in the capacity of an *asylum* against domestic tyranny:—1. From the power of a bad master—2. a bad father or guardian—3. or a bad husband.—In this latter case, adjudication, it should seem, would be scarcely necessary. Without serious ill-treatment, a wife would hardly exchange matrimonial comforts, an independent abode, and the government of a family, for celibacy under inspection—in company of her own sex only, and not of her own choice. Spite, or a project of governing the husband by fear of the privation would hardly go such lengths:—neither malice nor ambition are to such a degree stronger than self-regard.—Preferableness of such an asylum to a domestic one in the present case, though it were under the protection of a parent, or elder relation of the same sex.—Elopement, though it were to the house of a natural guardian, is seldom exempt from danger, never from suspicion, during the attractive age: Infidelity, when it was not the cause, being in such circumstances but too natural an effect.

On reconciliation, the industry-house, like a well-regulated convent, but free from the objections that attach on convents, would restore the fugitive, without spot or suspicion, to the marital arms.†

There, as in a convent, conjugal infidelity, become scandalous, might moreover receive its punishment, from a tribunal of magistrates—sitting in private, unless publicity, with or without the intervention of the ecclesiastical court or a jury, be reclaimed by either of the parties.‡

III. Utility of the industry-house regimen, to divers classes, comprised within the principal design of it, in the character of a *certificate*, as well as of a *pledge*, of good behaviour, in their respective spheres. 1. and 2. To out-of-place *domestic* servants of the female sex, it would be a preservation of chastity and of reputation of chastity: so of the habit of industry and regular obedience, in both sexes. 3. and 4. To *repentant* prostitutes, and to *friendless* females, at the approach of the perilous age, it would be an *asylum* for the benefit of the lower classes, that is, the great bulk of the community; doing, upon a universal scale, and without expense, that sort of good which is endeavoured to be done upon a minute scale, but at no minute expense, by two magnificent as well as benevolent institutions—in a style of accommodation, congenial (as is but natural) to the habits and sentiments—not so much of the classes into which they are to be returned,

* Not a debt paid by the humane and respectable society instituted for that purpose, but might have been paid with still more advantage by the debtor himself, in a proposed industry-house. In two months the largest court of conscience debt would be worked out, though the charge of maintenance were as high as 4d. a day, and the earnings no more than 1s. Number relieved to 4th April, 1798, 15,827: average amount of debt, costs included, £2, 10s. 8½d. [Herald, 16th April, 1798.]—Excellent this! yet, how much more excellent, that he who owed his imprisonment to his own act, should owe his deliverance to his own industry.

† In this case, as in many others, the legal remedy—*divorce a mensa et toro propter sævitiam*—is rendered altogether inaccessible to the self-maintaining poor—that is, to the great bulk of the community—by the artificial expenses of procedure.

‡ The exhibition of a wife, sold like a beast with a halter about her neck, in a public market, would not then, as at present, offend the moral eye.

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as of those higher classes to which they are indebted for their support.

IV. Under the plan already traced, the Employment Gazette itself (see Ch. i.) will be a perpetual school of morality—an inexhaustible fund of unexpensive premiums for good behaviour. The more *points of good character* a man can muster, the better and speedier his chance for employment, and the better the terms upon which he will be received. The inference is natural from theory; and there will be the evidence of experience,—published experience,—to show whether it be not just.

Let it not be imagined, that because the *place* is the same, the *treatment* given in it may not be infinitely diversified. There is nothing either in relief or in correction, that should render them incapable of being administered—administered to the pinnacle of perfection—within the compass of the same walls. Even now, the same chamber is witness to the caresses given to the dutiful, and the chastisement given to the froward child. It is in truth but through want of wisdom, not by any law of nature, that the disparity has remained hitherto so wide between penal justice and domestic discipline. *Good order* is a condition not less necessary to the delicacies of domestic comfort, than to the utmost severities of public justice. The presence of the fostering hand is not less necessary to the infant, of the feeding hand to the hungry, of the assisting hand to the infirm, of the healing hand to the sick, of the soothing hand to the afflicted, or of the ministering hand to the luxurious, than that of the avenging hand to the criminal who is to be punished for his crimes. The one thing needful was a perfect and general instrument of good order;—an instrument not to be constructed without the aid of the *inspection-architecture*. The *desideratum* being found, good order may be introduced into any system of management, and applied to all purposes that end in utility, however wide of each other they may appear to spread at the first stage.

Chap. X. *National Force strengthened without Expense.*—Section I. *Land Force.*—Another collateral benefit, of a most important nature, deducible from the proposed industry-house system—without effort—without disbursement—without expense to anybody;—a nursery—a supplement—and, in part, a *succedaneum*—to the existing system of national defence.

One of the members of the official establishment a drill-serjeant:—on Sundays to act as such, in training the fencible part of the apprentice-stock, after an appropriate prayer:—on week-days, in the capacity of a clerk.—Arms for exercise, whatever have been condemned as unserviceable, as far as they will go.—Age of training, from fourteen, or earlier:—age of requisition, from eighteen, seventeen, or even sixteen:—numbers to be expected, by the time the accumulation of the apprentice-stock has attained its maximum (according to a *basis* of calculation not now relied upon, but to which the eventual number, if deficient, might, by the means of extension hereinafter suggested, beyond a doubt be raised) from sixteen to eighteen, 29,296; from eighteen to twenty-one, 42,841; from sixteen to twenty-one, 72,137.

The establishment of officers would be framed, of course, upon the existing constitutional plan:—some of the inferior, the Crown might perhaps find a convenience in selecting out of the official establishments, to whose authority those privates will have been in the habit of paying such unvarying obedience;—the superior, from the landed strength of the country, as at present.

Utility of a corps thus constituted, not only against the rare and contingent danger of invasion, but as an eligible and universally present *succedaneum* to the less popular assistance of the regular force, against casual tumults, the result of *sudden* and *partial* discontents. Sequestered from the world at large, the intercourse, as between house and house, written as well as personal, being altogether at the Company's command, (that is, through the Company, at the command of Government, and of that Public on which Government depends for its existence,) no existing body of military force could be equally proof against seductions and combinations. Completely trained by so many years of exercise, at the expiration of their apprenticeship, and consequent diffusion into the mass of the population, they would form an ample fund of disciplined force, ever ready in the hour of exigency.

Not the slightest idea of hardship could attach upon this gentle and self-executing institution. Under the military conscriptions that prevail in Russia, Austria, and Prussia, the discipline is severe, the service constant and frequently foreign, the danger frequent, and in full prospect. *Here* the service is purely home-service, the duties occasional only, the dangers no other than what they will have been prepared for from birth; and those contingent, and, unless at a moment like the present, scarcely to be looked upon as probable:—the whole concern, (instead of a terror,) an exercise, a pastime, and a spectacle.—No need of their lodging, any of them, anywhere out of an industry-house, unless in case of an immediate approaching invasion. Were even the service ever so irksome, and the dangers ever so serious, there are none, surely, on whom the lot could fall with equal justice, as upon those who, indebted to public charity, all of them for maintenance and education, many of them for life itself, may literally be termed the *foster-children of the country*.

Inconveniences attending the militia establishment, on its present footing.—The obligation falling by lot on individuals, many of them ill-adapted to it by disposition, none of them prepared for it by education:—married men taken from their families, and the burden of

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maintaining those families thrown upon the public;—a great and recent addition to the burden of the poor-rates:—all of them exposed to the influence of corruptive aggregation, and initiated (since such is the custom) into habits of idleness and dissipation:—all thrown out of employment;—a means of existence which, on their return to their families and homes, many of them may find it difficult to recover.*

Section II. *Naval Force.*—The maritime industry-houses adjacent to the sea-coast, or great rivers, would be a natural nursery for the navy—private as well as public.—A suitable turn might be given to the education of the apprentice-stock—Swimming universal.†—Here they might be initiated, from the earliest age, in the exercise of the handicraft arts practised on ship-board.—Examples—Oakum-picking—rope-splicing—sail-making—net-weaving—even ship and boat-carpentry: alternately with land trades, in peace time: practised exclusively, in war time.—(See Book ii. Ch. viii.)—Navigation, the literary part of it, might be added *here* to whatever school-learning were taught on Sundays, on the principle of the Sunday schools.—Minds as well as bodies being thus prepared for this branch of service, by original destination, education, example, and habit, the male youth of the maritime industry-houses would constitute a sort of naval militia:—but should, at the same time, be trained to the land exercise, as well as those of the inland houses.

In situations where the fishing business could be carried on at ordinary times without loss, upon occasion of a glut, instead of degrading this valuable food to a manure, the opportunity might be embraced of victualling the circumjacent industry-houses to a considerable distance—inland as well as coastwise.‡

Could any use be derived from the maritime industry-houses towards forming a chain of signals?

The chain of maritime industry-houses might form a valuable addition to the existing stock of sources of relief against ship-distress and shipwreck. By means of an out-post or two, here and there, betwixt house and house, a chain of telegraphic communication, embracing the whole coast, might thus be kept up at a comparatively small expense.

Section III. *Naval Timber.*—By Report 11th of the Commissioners for inquiring into the Land Revenue, (printed in 1792,) the stock of ship-timber in the country is lessening and growing precarious.—The nature of the proprietorship, in the case of the proposed Company, would be peculiarly favourable to the rearing and maintaining of a stock that can be depended upon. The landlord here would neither be forced by necessity, nor so much as have it in his power, to cut timber at a premature growth.—Elsewhere it requires a numerous and uninterrupted succession of frugal and uninterruptedly prosperous landlords, to preserve an oak to its full size. Here the vegetable hopes of the nation would not be left at the mercy of careless, malicious, or predatory tenants: no persons having access to the plantations but such as would be more under command than either the neighbours or the inhabitants of a private estate, and incapable of enjoying the fruit of depredation without discovery. The preservation of the plantations might be rendered the joint interest and concern of the Company and Government. The Company, at the same time, might lie under a perpetual injunction as to the cutting of timber, otherwise than with the allowance of government; and might be under an obligation to keep a perpetual account of it, tree by tree:—a sort of obligation to which ordinary proprietors cannot be subjected. A periodical state of the timber, verified by oath of proper eye-witnesses, might be included in the Company's periodical *Reports.* The plan of book-keeping would of course be extended to this most valuable part of the stock. The plantations delineated upon a scale in which, from the first, the number of plants within a given square, and, after thinning, the place of each remaining plant might be marked, and the plant denominated by a number.—Annual surveys, enumerations, and valuations.—Plantation book,—in which every plant, as it disappears, shall be marked off, and the cause, or supposed cause, of its disappearance entered under heads:—as, *natural decay—blown down—destroyed by animals*—(naming the animals, when ascertainable, as hares, rabbits, &c.)—Places for a plantation in every industry-house demesne, where soil and situation permitted, would be, 1. The *ward-separation belt*—2. The *exterior-sequestration belt;* viz. the belt planted for the purpose of contributing to the general design of sequestering the apprentice-stock from promiscuous association with individuals at large.—(See Book ii. Ch. ii. and iii.)

Chap. XI. *Rate of Infant Mortality diminished.*—Under the head of *Child-nursing,* (Book ii. Ch. ix.) together with what bears relation to that subject, in the chapter on the *Principles of Management,* (Ch. iv.) a plan has been sketched out, by which the rate of mortality, during the whole of the apprentice-period, but more particularly during the trying period of infancy, bids fair for being reduced to its lowest terms:—lower, much lower—for what should hinder it?—in this hitherto neglected line of life, than in those higher

* For the advantages of taking the earliest youth for the period of military service, see a very ingenious, judicious, and well-written paper, in Roederer's Journal d'Economie politique.

† On board of king's ships, not half, scarcely a third, (I have been assured,) can swim. Five or six have been known to be drowned in the course of a voyage.

‡ At a pound a-day per head, (adults and non-adults together,) two carts, holding half a ton each, with an ass to each, would carry, in a day, a day's provision from one house to another.

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lines,—the highest not excepted,—which command every attention that opulence can procure.

Under the head of *Education*, including what bears relation to that subject in the chapters on the *Principles of Management*, and on *Employment*, a plan has been sketched out, by which, under that important head, the condition of the Company's wards promises to be placed upon a footing obviously more eligible than that of the children of the self-maintaining poor, even in the highest-paid classes.*—Condition in life is better and better, in the *ratio* of the stock of ways and means to that of wants. Here the *ratio* is increased at both ends. The stock of wants reduced to the lowest limits, by being confined, from the beginning, within the circle traced out by nature: the stock of ways and means, on the other hand, augmented by a multiplication of talents and employments, and thence of securities for future livelihood, hitherto without example.

But should it appear, that the condition of a Company's apprentice is more eligible in every point of view—probability of life and health, good conduct, and assurance of future livelihood, than that of his fellows without-doors: and of this superiority, such part as is demonstrable (which is the case with so much as regards life and health) should stand continually demonstrated to the eyes of all men, upon the face of the *Reports*, natural affection, would in many cases join with economy, in disposing a prudent parent to put his children in possession of the same advantages.

An arrangement of this kind would operate to the unspeakable advantage of all parties. The causes of good management would be reacted upon and strengthened by this collateral effect. Good management bestowed on the indispensable or free-school part of the non-adult stock—the bound apprentices—would procure a stock of volunteers in the character of *boarders*: and as the profits derivable to the Company and its agents, from these boarders, would operate when the time came, so would the prospect of it operate, from the beginning, as an incentive, calling forth and applying their utmost exertions to the rendering the condition of these their wards as advantageous, in every respect, and as conspicuously and unquestionably so, as possible. By the reduction of infant mortality among the pauper stock, the way would thus be paved to a similar reduction among the offspring of the self-maintaining stock: and the prospect of this latter reduction, and of the profit that might accompany it, would tend in the most powerful degree to promote and increase the original reduction, in the instance of the pauper stock. Sow *causes*, and you will reap *effects*.—Can it be wondered at, that the crop of good effects should in this field have hitherto been so scanty, when the list of good causes sown is so mere a blank!

By the defalcation of all factitious wants,—by the reduction in the expense of inspection,—(the result of the inspection-architecture principle, and of the advantage of operating on a large scale,)—the expense of rearing youth, in the best manner, may not only, without the smallest prejudice in regard to probability of life, health, or comfort, but with increased benefit in all those respects, be reduced to a pitch considerably below the amount of what a sufficient allowance of the stock of articles deemed *necessaries*, according to the customary mode of living among the working classes, could be afforded for in a private family of the working class. The difference betwixt the *customary* expense of maintenance, and the *necessary* expense of maintenance, upon an *improved* plan, would be found so great, as to admit of the Company's reimbursing the amount of the receipts upon as many of their boarders as happen to die under their care, reserving still a profit sufficient to afford to the Company, and its agents, an ample recompense for every exertion they can bestow.†

Here, or hereabout, might be the *maximum* rate of receipt and profit.—Under this, the

* For a summary but detailed and comprehensive view of the advantages peculiar to this and other branches of the Company's population-stock, see Book iv. PAUPER COMFORTS.

† *Example of the profit derivable to the Company, and, at the same time, of the saving obtainable by the parent, on a child thus taken in to board,—beginning at the first year of age.*

	Per Week. £	s.	d.	Per Year. £	s.	d.
Expense paid for a pauper in some of the London parishes . . .	0	3	6	9	2	0
Price to be charged by the Company, say .	0	2	8	6	18	8
Expense to the Company, say	0	1	4	3	9	4
(Expense at Glasgow, among the self-maintaining poor, as per Ch. v.)	0	0	6¼	1	8	2
Deduct for deaths, ten per cent.				0	13	10½
Remains, neat profit, ninety per cent. upon the £6, 18s. 9d.				2	15	5½

In Halley's Breslau Table, the rate of mortality within that period in Breslau, the capital of Silesia, is fourteen and a half per cent.—but the proposed industry-houses are all in the country—and the attention paid will be beyond what can be paid, even in the country, among the self-maintaining poor.—If the children dying within the year, were to die equally in all days of the year, it would come to the same thing as if each had lived, and the expense upon it been continued but *half* of the year: but of those who die in the year, more than half die within the first *quarter*, (See the Chester Table, in Price on Annuities,) so that the deduction of £10 per cent. is in truth too large.—Remains £90 per cent.—This for the first year of age: in the subsequent years, up to the period of self-maintenance, the necessary expense is not greater, and the

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terms might be accommodated to the circumstances of the parents, at the discretion of the Company, in favour of the lowest-paid classes. As to the state of those circumstances, in each instance, the Company being master of its own favours upon its own terms, there could be no difficulty about evidence. The existence of a positive value, in the case of an average child in this situation, for the period between birth and twenty-one, being a point supposed to be established, the child would stand as a security for the expense of its board: on this condition, the terms of payment might be accommodated to the convenience of the child's friends; except that if the score were not cleared by the end of a certain time, (say a twelvemonth,) the child should become *forfeited*, i. e. considered as bound till twenty-one, in the character of an apprentice. Regular payment should be required, at any rate, for some of the first weeks, lest a child supposed to be likely to die should be brought to the Company, for the purpose of its dying under their care: a result by which (besides the expense of burial, &c.) the reputation of the management, in this respect, would be injured. At whatever age a boarder of this sort happens to die, under the charge of the Company, the whole of the money that has ever been paid with him should be returned: though it then will, of course, make the reduction greater and greater the older the child is at the time of his death, it will not, however, by the time of his arrival at the age of self-maintenance, have reduced the profit so low as to eighty per cent. For the purpose of this eventual receipt, a testamentary guardian, appointed by the will of the surviving parent, might stand in the parent's place: in default of such appointment, the money might lapse to the Company, and the child remain to the Company on the footing of an apprentice. The older the child, when first placed with the Company on this footing, the greater, of course, the advantage to the Company; since so much more of the expense of the unproductive period will have been defrayed, and so much more of the period of greatest mortality will have been got through.

If a parent, able to pay in this way for a child's board, chooses rather to bind him to the Company on the footing of an apprentice, the money that would otherwise have been employed in paying for his board, would, if invested in the Frugality-Bank, have produced, by the time of his arrival at twenty-one, a very considerable sum, which at that time might even serve as a capital to set him up in business; or, in case of a female, would afford her a marriage-portion:—without interest, £145 : 12s.: with benefit of compound interest, at four per cent. about £219:—at five per cent. about £247.—On this plan, in the event of the death of the child before his arrival at full age, the parent would, in compensation for the wound suffered by his affections, find himself not only relieved in pocket, but enriched.

Examples of classes of persons, in whose circumstances it might be particularly eligible to a man, to have his children taken care of, from birth, or soon afterwards, for the first years, (say the first two, three, four, five, six, or more years,) according to circumstances; and who would naturally be disposed to profit by the opportunity, could they have, and at the same time be known to have, as full assurance of the child's being preserved in life, health, strength, and good habits, as they could have were it to be kept at their own homes, or at any other private house.—1. Domestic servants—in whose case it would have the farther good effect of removing an obstacle to marriage. 2. Widowers among the self-maintaining poor, left with small children. 3. More especially widowers of the seafaring and other classes, whose occupations carry them frequently to a wide distance from home. 4. Married men, with young children, and diseased, infirm, or ill-behaved wives. 5. Married men whose wives were engaged in business for themselves, or whose whole time was wanted for the assistance of their husbands. 6. Fathers who, having young children, have given them step-mothers.

In proportion as the success of the plan came to be demonstrated, and the proposition established, *that a child's probability of life is greater in an industry-house than elsewhere*, parents even of the superior classes, who otherwise would have put their children out to nurse, or to an early boarding-school upon the ordinary footing, would see the advantage of trusting them to the Company in preference; at least up to that period at which a child begins to require, as supposed, a mode of treatment adapted, in point of society and instruction, to the rank and circumstances of the circle in which it will afterward have to mix: and if averse to avail himself of the pecuniary saving, a man might make what further recompense he thought proper to the Company or its agents, or give the whole, or any part of it, to be applied in his own way, in augmentation of the fund for pauper extra-comforts. —See Book iv.

Means of ascertaining the rate of mortality, particularly at the first years of life, in the community at large, to serve as an object of comparison with that of the pauper community, particularly at the same years of age, under the Company's care, for the purposes above proposed—The Company, by its agents, at the respective industry-houses, to procure, at stated periods, copies, or sufficient abstracts, of the registers of the several parishes comprised within the circuit of each industry-house. Such copies or abstracts, attested, in each case, by the resident minister and parish

rate of mortality much less: in Christ's Hospital, though in London, never more than one and a half per cent.

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clerk, might be periodically transmitted by the clerk to the chaplain of the house; each parish being visited for that purpose by a pauper of the house, whose connexions lay that way.*—(See Ch. v.)—From these returns, tables to be made, under the care of the chaplain, exhibiting the rates of mortality, absolute and comparative, for the several ages, as between the population of the *industry-house*, and the general population of the industry-house *circuit*, in which it stands. Of these tables, regularly published at weekly or monthly intervals, the result might be read and exposed to view in the churches, (as proposed in Ch. i.) and would thus be perpetually presenting itself to the eyes, as well as the ears, of parents of all classes, the poorest not excepted.

Such are the documents necessary for demonstration; and for which, therefore, it would be necessary for a parent to wait, if nothing less than demonstration could satisfy him in such a case. Yet where the security is in itself so strong, and the appearance it affords of attention, at least, so much beyond anything that is to be had from any other quarter, the number, to all appearance, would not be small, to whom the principle itself, without waiting for the result, would appear a sufficient ground for confidence.

The above securities for infant life not only have hitherto lain altogether out of the reach of parents, but are not so much as capable, in their full extent, of being afforded on any other than the plan here proposed.—Requisites, the concurrence of which is necessary to this purpose. 1. Capital for the maintenance of a stock of children in sufficient number to fill up the whole time of a set of nurses, acting as checks upon one another, several at a time, and relieving one another in such manner as to continue the attendance without interruption, night as well as day. 2. Ditto, for the maintenance and pay of the nurses themselves. 3. Ditto, for a sufficient stock of suitable superintendence, medical as well as economical, constantly present. 4. Ditto, for a building adequate, in point of magnitude, to the above purposes. 5. Ditto, for ditto, suitable in point of construction, *i. e.* constructed upon the central-inspection plan. 6. System of book-keeping regular, suitable, and all-comprehensive. 7. Means of exhibiting the relative rate of infant mortality in the establishment, as compared with the average rate without doors.—Where children are taken in to nurse, on the ordinary plan, the nurse having a house and a family to manage besides, can spare but a part of her time for attendance on the children, and is therefore scarcely looked upon as capable of taking care of so many as from six to eight children at a time: what she receives for these children must therefore, besides defraying the expense of their maintenance, be sufficient to defray the personal and house expenses of the nurse. Not being secure of a sufficient number for a constancy, she could not afford to take them upon the life-assurance principle: hence, when the preservation of infant life has been made a capital object, (as in the *Foundling Hospital*,) and the employment of the duty-and-interest-junction principle recurred to as a means, the only modification of it employed has been the giving extra pay, in the way of a premium, in the instances where the object has been accomplished:—that is, when the child has been kept alive to a certain age.

Though the terms and place of boarding would be peculiar to the establishment, the method of treatment would, if crowned with success, spread itself, of course, in the community at large, by means of the girls employed in the house as *nursery-girls*; who, when out of their time, or, by the allowance of the Company, before that period, would naturally be sought after in private families. Hence, too, one sort of *post-emancipation* provision for this part of the apprentice-stock. To exhibit the rate of mortality, under this management, in private families, returns might be required to be made, by each nursery-girl, of the result of her management in every family she served—stating how long she served in each—whether she left the child dead or alive—if alive, whether in good health, or under any, and what infirmity, &c. From these returns, it might be collected how much was owing to local situation, or mode of life observed in the family, and how much to management—except in as far as the plan of management learned in the industry-house happened to be counteracted by the family. For obtaining these returns, so long as a nursery-girl continued in the service of the Company on the apprenticeship footing, the authority of the Company would suffice; to insure the communication after the expiration of the apprenticeship, the Company might be empowered to cause a bond to be given by each girl, conditioned for her making the proposed returns:—a certificate of good behaviour would, if customarily given by the Company, come of course to be required by each private mistress; upon this certificate might be printed a memorandum of the bond, with instructions how to make the entries accordingly, and blanks for the making of them: by this means a girl could never avail herself of her certificate, without exhibiting to view the obligation imposed on her in that respect, and showing how far she had fulfilled it.

Chap. XII. *Useful Knowledge augmented and disseminated.*—Observation and experiment compose the basis of all knowledge. This basis, in proportion as it spreads in extent, swells in solidity and value. Hitherto the stock of relative *data*, or known facts, the

* Parishes and parish-like districts, about 15,000: number of industry-houses, at the greatest, five hundred: number of parishes, &c. to an industry-house circuit, or district, on that supposition, about thirty:—at the least, two hundred and fifty: parishes, on that supposition, sixty.

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materials of which this basis is composed, has been in almost every line, and more especially in the most useful lines, scanty, accidental, irregular, incomplete, both as to time and place,—the scattered fruit of the uncombined exertions of unconnected individuals. The institution of the proposed Company would afford the first opportunity ever presented to mankind, of enriching the treasury of useful knowledge by contributions furnished on a national scale, and on a regular and all-embracing plan; and would thus form an epoch —not only in political economy, but in many and many another branch of science. The sciences which now await this epoch, for a degree of improvement altogether unattainable by any other means, would thus be raised to a pitch of certainty, to which neither example, nor, till now, so much as conception, has perhaps ever reached.

The advancement of knowledge is performed —partly in the way of *extension* or *augmentation*—partly in the way of *propagation* or *dissemination*:—in the way of extension, in proportion as new lights are added to the old stock; in the way of dissemination, in proportion as the multitude of individuals, to whom any part of the existing stock of lights has been communicated, is increased.

I. *Augmentation of useful Knowledge.*—Examples of branches of science in respect of which the proposed institution may be made productive of this effect. 1. Medicine—the therapeutic branch, surgery included. The collection of *sick* and *ailing* books of the industry-houses, kept according to a universally pre-established plan, with proper abstracts, periodically made and published—exhibiting, in the instance of a multitude of individuals, amounting at the outset to (suppose) forty or fifty thousand, and capable of being increased, by the accumulation of the apprentice-stock, to a million and upwards—congregated in from two hundred and fifty to eight hundred establishments, spread over the surface of the country, at uniform distances.* 2. Medicine —the dietetic branch, (*a*) as to what concerns *food.—Sources of information*—The *mess-books*, as compared with the *sick-books* and the *progress-books*—exhibiting the effects of food upon health and strength, under the diversities, in point of quality and quantity, established for this purpose. (*b*) *Drink*—result of the total abstinence from fermented liquors, in the instance of at least the *apprentice*-stock, and *new-coming* stock, of all ages: to which might be added, by way of contrast, the result of the indulgence that might be given in respect to the whole or a part of the *old-stagers.—Sources of information* as before.—(*c*) *Temperature*—Some of the apartments kept uniformly hotter, for this purpose—some uniformly colder—others alternating.—*Sources of information* as before: with the addition of the uninterrupted course of *thermometrical* observations; also of the entries in the *house-warming*, or *fuel* books. (*d*) *Commencement of sexual intercourse.*—Result of the early marriages proposed to be permitted and encouraged in the apprentice-stock, previous to the proposed respective periods of emancipation of the two sexes.—*Sources of information*, the *sick* and *ailing* books, and *progress* books, as before.

3. and 4. *Mechanics* and *Chemistry.*—See *Domestic Economy, Technical Economy*, and *Husbandry.*

5. *Domestic Economy*:—in relation to (*a*) *food.—Sources of information*—The *mess* books, as compared with the housekeeper's *maintenance-consumption* books in relation to the raw ingredients, and the *fuel* book.—(*b*) *Fuel*, burnt for *heat.—Sources of information*—The *fuel* or *house-warming* books, as compared with that part of the *furniture inventory*, which contains a description of the stoves, &c.—the *house re-*

* Heads for a book, of the *elementary* class, (see Book ii. Ch. x.) exhibiting the journal of an individual, when put upon the *sick-list.*—By way of table, description of the person, in respect of name, sex, age, station, &c. as per *entrance-book*, with the day of the admission on the sick-list. I. First day of the disease.—Heads—1. Supposed *name* of the disease. 2. *Symptoms*, in a set of subordinate columns, sufficient for the reception of as many classes of symptoms as the human frame has been observed to be ordinarily susceptible of.—[A table of symptoms, already constructed for this purpose, with columns, sixteen in number, may be seen in a paper by Dr *George Fordyce*, published in the *Transactions of the Medical Society*—London, 1793 —under the title of "*An Attempt to improve the Evidence of Medicine.*"—Printed for Johnson: of whom may be had "*Blank Schemes for taking Cases*," according to the plan there exhibited.]—3. Prescription in respect of *employment*—viz. *a.* Cessation from all work. *b.* Change of work: *ex. gr.* from out-door to in-door. *c.* Abatement of work, by defalcation from the ordinary number of working hours. *d.* Ditto, by defalcation from the quantity of piece-work.—(In the three last instances, it is a case for the *ailing list.*)—4. Prescription in regard to *diet*—*a.* Diminution or increase of quantity. *b.* Change of quality. 5. Prescription in respect of *medicine.* 6. *Execution* of the prescription, in regard to employment, diet, and medicine, as above.—Change of temperature, by clothing or fuel, putting to bed, &c. may be considered as comprised under the head of medicine.) —7. *Subsequent* symptoms during the day—distinguishing such as appear to be the result of the prescription.——II. Second, and every subsequent day, same heads repeated, *mutatis mutandis.*——III. Last day—different modes of termination. 1. Cure complete, thence reinstatement on the *ordinary* or *healthy*, and thence on the *full-work* list. 2. Cure partial, or approaching—thence transfer to the *ailing* list. 3. Supervention of, or change to another disorder, deemed not incurable. 4. Ditto of, or to ditto, deemed incurable. 5. Death.

An elementary *ailing-book* will (it appears already) be a book of a compound form, comprising the heads of an elementary or individual's *progress-book*, or *working-book*, together with those of an elementary *sick-book*, as above exhibited.

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gister of temperature, and *meteorological journal* for the temperature without doors.* (*c*) Ditto, burnt for *light*.—*Source of information*—The *house-lighting* book.†—So in regard to the other branches of *maintenance-consumption* expenditure. (*d*) *Child-management*:—the physical branch—Sources of information—*Child's progress* book,‡ compared with the *children's mess* books, distinguished according to sexes and ages, and the children's division of the *sick* and *ailing* books, distinguished in like manner.—For the intellectual or *didactic* branch of child-management, see article *Logic*, farther on.

6. *Technical Economy*.—Under this head may be compared the management observed in the several branches of *manufacture* carried on in the system of industry-houses. Everything that concerns management in manufactures, belongs either to mechanics or to chemistry, or to both together. What comes under the department of mechanics, is in general too well ascertained to afford much matter for registration: but this is not the case with what comes under the department of chemistry:—Examples: Brick-making, lime-burning, mortar and plaister-making, pigments or impregnations for wood, glass-making, pottery, tanning, bleeching, paper-making, &c. &c., all of them included in the system of pauper-employment, by the principle of self-supply. Appropriate details cannot be given without plunging into the details of particular manufactures.—For analogous examples, see what has been said in relation to the several branches of domestic economy, as above.—*Sources of information*—The several manufacturing progress books, as compared with the *manufacturing-consumption* books; to which may be added such particular derivations, according to the nature of the subject, as may come from time to time to be minuted down by zealous and intelligent superintendents in the different branches, at the instance of the Company, or of their own accord.

7. *Husbandry*—including *agriculture* and *gardening*.—*Sources of information*—*Husbandry-progress* books, compared with the *husbandry-stock* books: also the *meteorological journal*, or register of the weather, as below.—The framing a set of husbandry books, with instructions for the use of them, would be a noble field for the exertions of the Board of Agriculture.§—Abstracts of the results of these books, when kept, to be periodically made and published under the direction of the Board.—Utility of an official relation between the Company's Direction-Board and the Board of Agriculture.—The Board of Agriculture, as a department of Government, to operate as a *Board of Control* over the Agricultural proceedings of the Company, so far as concerns the reporting opinions to the King and Council, and to Parliament, as to the national consequences of any extensive measure, but without the power of directing or negativing—being thus to the Company's agriculture, what the *Board of Trade* is to trade in general.—Unexampled *interest*, as well as *facility*, which the Company would possess, with regard to the devising, ordering, and registering agricultural experiments, weighing the result, and applying it upon the most extended scale, to practice. The benefit and opportunity of extension being greater than what exists in the instance of any individual landholder, or landowner, in the proportion of the number of *industry-house farms* (from two hundred and fifty to five hundred) to one.

8. *Meteorology*—a branch of science, consisting chiefly in mere observation without experiment, but subservient to *medicine*, *domestic economy*, *technical*, and other branches of *chemistry*, and *husbandry*, in a variety of ways. *Sources of information*—The *meteorological journal of the house*, or register of the weather—to be kept by the *medical curator*, with the privity of the chaplain; whose assent to, dissent from, or absence, at the time of each entry, might be noted in the book.‖

* See this species of information exemplified in the account given by the Foundling Hospital of the savings by a kitchen on Count Rumford's plan, as advertised in the newspapers of 1797.

† For the sake of experiment, the expenditure under this head might be compared with the results of a *photometer*, or instrument for measuring the degree of illumination, invented and named by Count Rumford, and published in the Philosophical Transactions.

‡ Or Calendar of *Hebe*—so called by analogy to the Calendar of Flora; a term used by botanists to express a journal of the progress of vegetation.—(Hebe the goddess of youth, as Flora of flowers.)—Example of heads for a Calendar of Hebe, arranged in two classes—1. Advances independent of instruction:—First indication of fear; smiling; recognising persons; indication of a preference for a particular person; indication of dislike to a particular person; attention to musical sounds; crowing; appearance of first tooth; appearance of each of the successive teeth; duration and degree of pain and illness in cutting teeth; giving food or toys to others; attempt to imitate sound; laughing; general progress in bodily or intellectual acquirements, whether uniform, or by sudden degrees.—2. Advances dependent on instruction:—Standing supported by one arm; standing supporting itself, by resting the hands; token of obedience to the will of others; command of natural evacuations; walking, supporting itself by chairs; standing alone; walking alone; pointing out the seat of pain, &c.

§ For the importance, difficulty, and rarity, of a good system of agricultural book-keeping, see ANNALS OF AGRICULTURE, vol. xxviii.—a paper by the Editor. What pen so well able to cope with the difficulties, as that by which they have been so well delineated?

‖ A check upon carelessness on the part of the medical curator, who otherwise, to save himself trouble, might make entries without due regard to accuracy.—If the meteorological journal of a single spot be worth the place which it regularly occupies in the *Transactions* of the *Royal Society*, how much greater the value of a similar set of journals, for a

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9. *Book-keeping*, in all its branches.—*Sources of information*—The books of the Company compared with the benefit derived from them in practice, in respect of the goodness of the management, under every head: a result which, according to the plan of book-keeping proposed, will be constantly apparent under every head, upon the face of the Company's periodical accounts, as published in the *Company's Gazette*.

10. *Logic*—In respect of a division of the branch of it termed by Bacon *ars traditiva*,—the art of communicating ideas:—in the present instance, the art of communicating ideas to uninformed minds.—*Sources of information*—*School-progress* book: containing minutes of the course of instruction pursued in each industry-house, in relation to the several branches in which instruction is administered to the non-adult class—regard being had to age, sex, choice and order of subject-matters of instruction, quantity of time employed, number of scholars to a teacher, and mode of teaching observed in each instance, with the results in point of success, absolute and comparative.*

II. *Dissemination of Knowledge*.—1. Whatever branches of instruction were expressly taught, or points of management practised, with success in the above or any other ways, in the system of industry-houses, would, upon the emancipation of the apprentice-stock, be disseminated, along with them, through the community at large. 2. They would in a less direct and certain way be disseminated, more or less, in the way of adoption and imitation, through the bulk of the self-maintaining poor; and in both cases to a degree of extent, and with a degree of rapidity, proportioned to the number of central points (the industry-houses) which the light of instruction would thus have to issue from.† 3. In the case where lessons were given in form to the apprentice-stock, or any other branches of the population of the house, non-adults, and others, of all ages, among the self-maintaining poor without doors, might be admitted on these occasions, in quality of auditors. This, by means of the structure of the building, (see the plate,) might easily be arranged, without any infringement on the *separation*-principle. 4. What was learnt by the house poor, rather by habitual practice than positive precept, might in some instances be communicated to those without doors, in the way of lesson, by courses of instruction directed especially to that purpose.

III. *Dissemination of Knowledge* continued.—Branches of knowledge, in relation to which instruction might be given, in a special degree, to visiters from without doors, beyond what came, of course, to be administered to the population of the house,

The art of *medicine*, (in the most extensive sense of the word,) as applied to the several sorts of *animals* maintained for the use of man.‡ The medical curator of the house, (if he has received that course of instruction, without which he ought not to be received into the house,) cannot be altogether a stranger to this important branch of science:—and a part of the qualification required of him, might be the having given himself the benefit of the valuable course of instruction, which of late years the neighbourhood of the metropolis, but of the metropolis only, has afforded in this line. Opportunities, more or less ample, of keeping up and enlarging his acquisitions in this way, will be afforded by the live stock of the industry-house farm. These acquisitions it might be made part of his duty to communicate to visiters from without doors, in a course of lectures, to be read on any day of universal leisure, on the principle of the Sunday schools Pursuing the plan originally devised by the learned and truly reverend Dr Derham, the instruction, rendered not merely *physical* but *physico-theological*, might be impregnated by the spirit, and rendered subservient to the sacred purpose of the day. Previous attendance on divine service, in the chapel of the house, might be made an indispensable condition:—a small fee, applicable to the augmentation of the stock of *pauper extra-comforts*, (of which in the next book,) might be required, or not, from visiters of the superior classes, and a ticket of recommendation from the inferior classes.

A system of instruction being thus provided, and rendered universally accessible, the having partaken of the benefit of it might be rendered a condition necessary to the faculty of practising anywhere in the character of a *farrier*. This might be accomplished, in the instance of this occupation, without private hardship, or public expense; which, in regard to occupa-

number of from 250 to 500 spots, equally distributed over the whole surface of the country?

* An *elementary* book of this kind—(see the chapter on *Book-keeping*)—a *Calendar of Minerva*, as it might be termed, would be a sequel, as well as in some measure a concomitant to the *Child's-progress* book, or *Calendar of Hebe* above-mentioned.

For examples of the success of the fellow-instruction principle, (employing children soon after they have received any branch of instruction in the capacity of learners, to communicate it to other children in the capacity of teachers,) see Dr *Bell's* account of the *charity-schools* at *Madras*—London, 1787—and a paper in the *Repository*, (a periodical collection in two volumes, published ten or twelve years ago,) giving an account of the result of the use made of that principle, in a charity-school of the higher class, in the neighbourhood of *Paris*.

† The mode of managing infants, as carried on by the assistance of the nursery-girls, may serve as an example of the indirect dissemination of that branch of knowledge, in both these ways.—See Chap. xi.

‡ The *veterinary art*—the term commonly employed on this occasion—extends not, in its proper signification, at least, beyond beasts of burden: it eaves out sheep, hogs, poultry, dogs, bees, &c.

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tions in general, has been so vainly aimed at, and at the expense of such an enormous mass of hardship, by the *statute of apprenticeships*. Private zeal, sharpened, if necessary, by encouragement from the Company, would exert itself in bringing in, as occasion served, those necessary materials, which in this, as in so many other instances, may be termed the *food of science*. A domestic animal, overtaken by natural death, would, instead of being thrown by, or employed at once as carrion, be conveyed to the nearest industry-house, that the seat and causes of the disease may be subjected to examination, and the loss sustained by the individual compensated, in some degree, by the accession derived from it to the general stock of useful knowledge. In this way the good which has been the object of so much exertion, on the part of a respectable society, as well as of parliamentary encouragement, bestowed with so much judgment, though at the public expense, might, without further expense to the public, be multiplied from two hundred and fifty to two hundred fold.

So much for the augmentation and dissemination of useful knowledge. On this collateral topic, thus much must suffice at present. Were this application of the proposed industry-house system the only use, might it not even then be styled *a polychrest—an instrument of many uses*? In this point of view, at least, *Bacon*, from whom the *word* is taken, would not have regarded it with indifference.—Would the several uses in any respect impede—would they not rather promote and fortify each other?

To the several scientific societies—medical, philosophical, and economical—this source—this inexhaustible source of information, would be a perpetual treasure.—Nor is it in the nature of science to be ungrateful for the assistance she would thus receive. So many classes of well-informed, inquisitive, and communicative observers, to whom an interest would thus be given in the copiousness and accuracy of the information brought to view,—so many unpaid and incorruptible inspectors—so many discerning censors, and enlightened applauders—so many ready instructors and advisers—of the various classes of persons from whom the information would have to come.

Chap. XIII. *Voluntary Charity assisted and directed.*—1. Officiating in the character of trustee, is one mode in which the Company may afford an indisputable and much wanted assistance to the purposes of private charity. What is every man's business being no man's business, funds bestowed for this purpose are universally and notoriously exposed to depredation. No adequate or comparable security is afforded by the existing order of things. Private trustees render no account but to the Court of Chancery; nor to that, unless called upon by some individual, who, for the chance of obtaining that satisfaction, must begin with dividing between government and the profession a sum sufficient to maintain a multitude of families for a multitude of years: and the account, when obtained, at the end of a certain number of years, and at this expense, exists after all but in manuscript, among the rubbish of an office.—Under the Company, everything of this sort would find its place, of course, in the most diffused of all publications, the *Company's Gazette*.

2. Another and very important assistance is by conveying, to the hands of the poor under its care, a very large mass of the fruits of private charity, which, though destined for the use of the burdensome poor, has, by a strange though scarcely avoidable fatality, been intercepted by the whole body of the rich. Whatever falls in from any casual fund, so much the less comes to be drawn for upon the standing fund: whatever donation, therefore, is meant for the poor in general, and unaccompanied by the designation of the individuals who are to receive it, scarce ever finds its way, and indeed on any other than the proposed plan, *could* scarcely ever find its way, in any case, to the hands for which alone it has been designed. A sum in gross (say £50) is sunk *in toto:* an annual sum, given in annuities amounting to less per head than the necessary expense of pauper maintenance, (suppose 40s.) sinks in the same manner: a sum about equal to that expense (say £5) produces, where there is a poor-house, the difference in point of comfort between home-maintenance and community-maintenance in the poor-house: the pecuniary benefit being shared *in toto* among the body of the rich. If (to suppose the most favourable case, but that a rare one) the amount of the annuity rises as high as to twice the necessary expense of maintenance, (say to £10) then indeed the poor, for whom the whole was designed, *do* profit by it, viz. to the amount of half; the remainder, a tax of £50 per cent. being levied upon the patrimony of the poor, for the use and benefit of the rich. Where, in the view of guarding against this misapplication, the benefaction has been appropriated, by the terms of it, to *poor persons not receiving parish allowance*, the effect of the appropriation has still been rather nominal than real. At the time of his being pitched upon for the benefaction, a man has not as yet become burdensome to the parish; yet, had it not been for the benefaction, he might have become so, perhaps immediately.

Under the proposed system, though scarcely under any other, this grievance is capable of receiving, and may easily receive, an effectual remedy. Every circumstance, by which the condition of an individual can be influenced, being remarked and inventoried, nothing being left to chance, caprice, or unguided discretion, everything being surveyed and set down in dimension, number, weight, and measure, a certain mass of comforts is marked out, under the name of *comforts of course*, as what shall be inseparably annexed to the lot of a pauper, under the Company's mangement, and

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served out by means of their efficient causes to all individuals without distinction, at the Company's expense. Other articles, which, though of less necessary complexion, are not incompatible with the plans and arrangements of the Company, may in the instance of each individual be added, or not, according as the amount of the expense necessary for the providing of them can be obtained from the voluntary charity of individuals, or from any other of the sources of *extra-comforts*, the list of which will be exhibited in its place. The ground being purposely and carefully prepared for the reception of the superstructure, what comes to be given with the view of its being applied to the use of the poor, and of the poor only, in augmentation of the stock of ordinary and universally-imparted comforts, may thus be certain of being conveyed to its destination, without misdirection or loss.—Borne aloft upon the platform of public charity, what private charity gains thus in power, is like what the dwarf acquired in prospect, when mounted on the giant's shoulders.

In the arrangement of the proposed industry-house plan, special care is taken that each distinct claim to extra comforts, whether on the ground of *special merit, or past prosperity*, or *peculiarly afflictive infirmity*, shall be held up to notice, in the view of receiving, though it were at the Company's expense, the indulgence competent to it. The existing poor-houses know of no such distinctions; they know of no such claims. Everything lies prostrate upon the same dead and dreary level: the virtuous and the vicious, the habitual beggar and the man of fallen fortunes, the healthy and the agonizing—all are confounded together, in the poor-house as in the grave.

The above-promised list of extra-comforts will be of use to private charity—not only by serving to guide the application of voluntary donations, but even by swelling the amount.

Each article of comfort might have its *receiving-box* appropriated to it: the boxes ranged by the side of one another, and over them an assurance, that whatsoever should be put into each should be faithfully and exclusively appropriated to the destined purpose. Along with these *particular* boxes a *general* one, to receive such donations, the application of which shall have been trusted by the donors to the discretion of the government of the house.

Accounts to be regularly published of the produce of each box, and of the application made of it, that the charitably-disposed, before they give in their contributions to any head of comfort, may see what degree of supply the want in question has received, in comparison with the other articles in the list.

To a second glance, at least, the effect of these specifications may not appear so trifling as it may be apt to do to a first. Pity, like other emotions, is never so strong as when called forth and excited by particular impressions. It is the observation of some particular want—some particular instance of distress—that gives birth to that *pain of sympathy*, which can no otherwise obtain relief than by the idea of the cessation of the suffering thus witnessed or imagined. To be assured, that not only the condition of the object will upon the whole be meliorated by what is given, but meliorated in that particular way—meliorated by the removal of that very distress, to the idea of which the pain of commiseration and the consequent desire of affording relief owed its birth—such an assurance is not only the most suitable, but the only perfect satisfaction which that desire can receive.

Even setting aside any particular distresses, which in their intense degrees, a man may have witnessed or imagined on the part of others, those which in an inferior degree he may have experienced in his own person, (an experience which the most opulent are not exempt from occasionally partaking of,) will have a particular tendency to summon the hand of charity to their relief. *Chilliness* will thus suggest to charity the importance of warm *clothing*.—*Good appetite*, or a love of good cheer, will propose additions under the head of *diet*.—An experience of the discomforts of disagreeable society, will produce oblations to the fund for augmenting the number of *peculium huts*, or *out-lying cottages*;—and so on. Charity, in a word, will act with the utmost advantage possible, when thus enabled to address herself to each individual by his particular experiences and sensibilities.*

Even the propensity to censure may thus be productive of useful fruit, and lend its aid to the purposes of benevolence. Be the scheme of provision ever so perfect, it is not in the nature either of man or things, that it should give satisfaction to every individual on every point. To some, it will appear deficient in one article—to others, in another. Of the observation of any defect, a natural consequence is—a wish to see it corrected. Every such wish is, as it were, a handmaid in the train of charity.—The existing system chills in a variety of ways the spirit of benevolence:—under the proposed system, it is kept to work, and preserved in its full vigour.

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* It is to the power which distress acquires over the sympathetic affections, by presenting itself in a specific shape, that we are indebted to the multitude of specific charities that have started up of late years. Charity for the relief of *ruptured* patients—charity for the education of the *deaf* and *dumb*—*philanthropic societies* for the education and relief of the families of convicts and other malefactors—not to mention *asylums*—*small-pox hospitals*—*venereal hospitals*—*lying-in hospitals, and dispensaries*, without number.

Who does not remember the subscription in the hard winter, for the benefit of the *soldiery* serving in *Flanders*? when flannel was bought for jackets, and ladies of quality turned tailors, and, instead of money or flannel, sent in the jackets ready-made.

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3. Lastly, a very great though indirect assistance will have been given to the fund applicable to the purposes of private charity, by the extirpation of mendicity. The money which is now so much worse than thrown away on beggars, will then be left free to be applied, still under the orders of charity, to purposes of pure and real use.

Book IV. Pauper Comforts.

Section I. *Introduction.*—We now stand upon proud ground. Having elsewhere plucked the mask from the visage of *false charity*, the arch enemy no less of comfort than of industry, let us take up *true charity* and seat her on her throne.

Economy too shall have her day. But her place is but in the second rank. Charity is the *end;* economy but the *means.*

Comforts destined for our pauper-community have already presented themselves as occasion served; comforts not despicable either in weight or number. With a few added articles, let us here bind them up into a wreath—an offering not to be disdained by the altar of Beneficence.

Reader, observe and judge, how little comfort depends on money, and how much on the attention and felicity with which it is bestowed.

Section II. Comforts of Course, *extended to all Classes:—together with the several Points of Management from which, as from their* Efficient Causes, *they may respectively be expected.*

COMFORTS.	EFFICIENT CAUSES.
1. Extraordinary security in respect of *health*—the first of all blessings, and without which all others put together are as nothing—better security not only than is to be found in a poor-house under the existing order of things, but than can ordinarily be found within the circle of a private family, even in a high sphere, not to say the highest.	1. *Diet*—Species of it regulated with an express view to health. Goodness of it, in its kind, secured by official examination, checked by right of complaint. Book ii. Ch. iv. vi. and x.—No *fermented liquors.* Book ii. Ch. iv.——No *excesses* of any kind: quantity of food not stimulating enough to invite to excess Irregularities of the impure class excluded by the inspection-architecture, and the *separation and aggregation* principle. Book ii. Ch. ii. and iii. — Ventilation constant, and regulated upon scientific principles. Book ii. Ch. iii.—Temperature regulated with a view to comfort as well as health. Book iii. Ch. xii.—Constant and universal cleanliness. See below.—The state of the whole community, in this respect, incessantly exposed to the view of the whole official establishment, the manager, chaplain, medical curator, &c. as well as of the visiters provided for the inspection of their management.—All causes of disease systematically guarded against. Sickness provided against in the way of prevention as well as cure.—Every attack from disease combated at its commencement.—No unhealthy occupation, no excessive labour, prescribed, or so much as permitted. The healthiest of all employments, *agriculture*, the principal one; but the violence of its exertions tempered by a frequent intermixture of domestic and slight-work employments.—No disorder capable of happening, or at least of continuing, for want of attention, the state of health in every house being regularly reported and made public.
2. Consciousness of a superior probability of long life and health.	2. Premiums to the amount of some thousands a-year annually distributed among the medical curators, &c. of such of the industry-houses (say 10) in which the degree of vitality (all classes included) shall have been highest, and the superiority evidently the result of attention and good conduct bestowed on this part of the management. Book ii. Ch. iv.—Could the idea of a regulation such as this ever present itself to the mind of a pauper, without producing a confidence in the exertions of which it cannot but be productive for his benefit, as well as gratitude towards the fountain from which they flow!
3. Security against want of every kind. 4. Consciousness of security against want.	3. and 4. Peculiar, as compared with the condition of the self-maintaining classes, though not in general, as compared with such of the burdensome

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COMFORTS.	EFFICIENT CAUSES.
	poor as are maintained in the way of community-maintenance in poor-houses.
5. Constant cleanliness and tidiness.	5. Facility given to the enforcing of regulations to this purpose, by the central position and omnipresence of the official establishment, the result of the inspection-architecture principle. Book ii. Ch. iii.—Interest given to the governor, governess, chaplain, and medical curator, in the enforcing as well as instituting regulations to this effect, by the centrality of their position, and their omnipresence, as before: and by the attention in the plan of management to promote a concourse of visiters. Book ii. Ch. iv. and v.
6. Employment favourable to health and recreation.	6. No unhealthy occupations, no excessive labour, so much as permitted—Employments of different kinds, out-door and in-door, hard work and slight work, sitting work, and moving work, alternating—and operating, with reference to each other, in the way of recreation. Book ii. Ch. iv. and viii.
7. Nights comfortable.	7. Beds separate. Book ii. Ch. vii.*—Temperature regulated, as before—Vermin, of course, extirpated. See No. 2. and 5. *Health and Cleanliness.*
8. Security against annoyance, as from fellow paupers.—See below, under *Apprentices.*	8. Centrality of position, and omnipresence of the official establishment, as before. Appropriate aggregation, as between class and class among the paupers themselves. Book ii. Ch. ii.—Right and facility of complaint. Book ii. Ch. x. (p. 393.)
9. Security against oppression from officers.—See below, under *Apprentices.*	9. Centrality and omnipresence, as before. The officers constantly in the presence of each other—Incapacity on the part of each to exercise any act of oppression without the immediate knowledge of the rest. Right, facility, and publicity of complaint to the public at large—from the institution of the *complaint-books.* Book iv. Ch. x.—Influence of the concourse of travellers and other visiters, and the regular publication of the conduct observed in the management under every head.
10. Entertainment of various kinds, a day in a week.	10. Psalmody and other suitable music. Concourse drawn by the music, physico-theological lectures, and other exhibitions. Book ii. Ch. iv. and xii. Book iii. Ch. xii.
11. A clear conscience, brightened by religious hopes.	11. Seclusion from incentives to sin, and opportunities of sinning—the result of the sobriety of the regimen, the omnipresence of the rulers, and the aggregation and mixture of the guardian classes of the paupers themselves with the susceptible classes.—Uninterrupted benefit of divine service.† See below, Section ii.
12. Occasional faculty of visiting and being visited by friends and relatives wheresoever situated, and howsoever dispersed.	12. Consolidation of the burden of maintenance, and assessment of it on one fund:—thence the local situation of the pauper a matter of indifference in point of interest to those on whom the nomination of his place of residence depends. Book i. Sect. i. ii.—System of cheap conveyance attached to each industry-house. Book iii. Ch. vii.—Equality of distance between industry-house and industry-house. Book. ii. Ch. iii.—Disposition to indulgence, in relation to this comfort, maintained by a clause in the director's oath of office. Book i. Sect. xi.

* Not two, three, or even four, jammed together in the same bed, as in some of the existing poor-houses, in a manner equally repugnant to comfort and decency

† "Blessed are the poor," says the gospel, "for theirs is the kingdom of heaven."—Of all descriptions of the poor, surely none that would possess a more promising claim to the benefit of this beatitude.

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COMFORTS.	EFFICIENT CAUSES.
13. Prospect of melioration of fare.	13. Prospect of success from the undertakings for catching and curing fish, from the maritime industry-houses. Book ii. Ch. vi. (p. 388.) Meat in additional quantity, in the event of a certain degree of profit resulting from the agricultural labour of the pauper population of the house.
14. Tranquillity—the result of security against that deterioration of condition, which, in the existing order of things, is liable to take place in all manner of ways and degrees, in consequence of changes in the parochial government.	14. Unity and permanence of the body possessing the government in chief.—Determinateness, fixity, and consistency of the fundamental principles of management. Book vi. Ch. i. ii.—In this subordinate community, steadiness of management will be what security for property is in the community at large.*
15. To those who have remains of property, preservation of the use of that property in kind, where the nature of it allows of its admission into the poor-house.	15. Establishment of the all-employing principle, and principle of sobriety.—Hence no fear that persons possessed of property will come to the Company to be maintained in idleness, as they would be apt to do, spending their property in strong liquors, if the opposite rule were not established in the existing poor-houses.†

Section III. APPROPRIATE COMFORTS; *extended by special Care to Classes ordinarily bereft of them.*

I. *Feeble hands, incapable of self-conveyance.*

COMFORTS.	EFFICIENT CAUSES.
1. Faculty of partaking of the benefits of divine service.	1. Centrality of the chapel part—thence the paupers, in the several divisions all round, within sight and hearing of the minister without quitting their seats. Book ii. Ch. iii.‡
2. Opportunities of air and exercise.	2. Faculty of being stationed for the purpose

* The perpetual revolutions to which the affairs of the pauper-community are subject, in the existing order of things, are not among the least distressing features of it. Change of persons, incessant, periodical, annual:—change of plans, and measures, frequent—from the working system, to the no-employment system—from the small establishment, or workhouse system, to the large establishment, or industry-house system—from the uninterested-management system, to the interested-management, or farming system, and (unless in the few places where the industry-house system is established) back again, with alterations continually liable to be repeated. In these obscure and partial, but always disastrous revolutions, every change brings suffering in its train: changes for the worse, immediately; even changes for the better, remotely; the deterioration, that sooner or later never fails to succeed it, being rendered in the latter case the more bitter, by the contrast it makes with the less uncomfortable state that went before it.

One revolution the proposed system (it must be confessed) supposes and proposes, and this too an universal one. But it is meant at least to be, and (may I not add) holds out a tolerably promising prospect of proving, a *final* one: and it ensures the community against annual, besides contingent ones.

† Nothing is in fact lost by this indulgence: since the Company, were they to claim the money, would never reap any advantage from their claim. A man who, when the distress for subsistence came upon him, had property, such as a cottage, or its furniture, or both, would sell it and spend the money, before he came into the house. If his property came to him after his betaking himself to the house, he would go out, and live upon the money till it was gone.

Past-prosperity hands will frequently be in possession of some little article or two, of ancient, perhaps family property, the saleable value of which, bears no proportion to the value set upon it by the proprietor; were it confiscated and sold, the difference between the saleable value and this relative value, this *value of affection*, would be so much lost. As far as room could be spared, it should be among the standing orders, to afford to a pauper of this class houseroom for such articles. A person of this description would naturally be indulged with the use of a *peculium* abode of some sort or other. In that case there would be a quantity of room, such as in the common apartments could not be spared.

Where property thus reserved as a peculium happens to be in the shape of income, (the rent for example of a cottage,) there will be some who would wish to live upon it for a proportionable part of the year, in the circle of their friends. This indulgence might likewise be afforded.—See farther on, *Extra-comforts.*

‡ To those who, regarding the salvation of souls as an object, regard the habit of devotion as a means, this single advantage, unenjoyed under the existing community-provision system, uncommunicable to the house-provision system, or to the self-maintaining poor, not to mention the rich, should seem enough to command their approbation and assistance.

A regulation one meets with in poor-houses having chapels within themselves is, that all that are well enough to quit their rooms shall pay attendance on divine service:—the benefit being thus sought to be imparted to all—except those whose case stands most in need of it, and among whom are likely to be found those who are most desirous of it.

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COMFORTS.	EFFICIENT CAUSES.
	of superintendence in the moveable watch-houses, adding at night to the number of *peculium* abodes. Book ii. Ch. iii. —Opportunities of being sent on errands to the circumjacent parishes, or industry-houses, by means of the system of cheap conveyance. Book iii. Ch. vii.—Means of air and exercise, even in rainy weather, in the corridor. Book ii. Ch. iii.
3. Opportunities of constant occupation, suited to their remaining faculties.	3. Largeness of the scale of management, thence faculty of finding suitable employment for every remnant of ability, however circumstanced. Book ii. Ch. iv. Book vi. Ch. i.

II. *Infirm and sick persons labouring under cases of peculiar difficulty.*

COMFORTS.	EFFICIENT CAUSES.
4. Superior chance of medical relief.	4. Publicity of the management in a *medical* as well as all other points of view—hence the attention and beneficence for which the medical faculty are so peculiarly conspicuous, attracted to all such cases. Book iii. Ch. xii.* (p. 427.)

III. *and* IV. *Persons deaf and dumb.—Persons born blind, or stricken with blindness while unmarried.*

COMFORTS.	EFFICIENT CAUSES.
5. Facility in regard to obtaining the comforts of matrimony.	5. Advantages of being educated or associated with persons of the opposite sex, partakers of the same infirmity. Book ii. Ch. xi.—A value, scarce yielding to that of ordinary labour, being moreover given to the labour of persons thus circumstanced, the difficulties which stand in the way of matrimonial union among persons thus circumstanced, especially in the case of the poor, whether charity-fed, or of self-maintaining families, are thus removed.

Section IV. EXTRA COMFORTS:—*to be imparted to more or fewer, according to Claims, Means, and Opportunities.*

1. Peculium habitations—occupiable at all hours but working hours: *viz.* infirmary huts, when not occupied as such. Book ii. Ch. iii. —2. Moveable inspection-houses, or field watch-houses—when not occupied as such.—3. Out-lying cottages. Book ii. Ch. iii.—4. Peculium garden-plots:—with or without the use of the huts or cottages.—5. Power of choosing a partner for the peculium habitations or garden-plots.†—6. Faculty of being chosen as a fellow-occupant of a peculium habitation or garden-plot.—7. Extra allowance in the way of clothing.—8. Bedding.—9. Diet.—10. Pocket-money.—11. Holiday times, in the manner of school-holidays, for a temporary residence in the circle of a man's friends.

The number of out-lying cottages may come to be extended—and that to an indefinite amount—by a demand created by persons able and willing to pay an adequate rent. The industry-house management affording on the one hand employment to hands of all descriptions—to many, who through one accident or another, could no longer get employment, or at least adequate employment, at their respective homes—and, on the other hand, affording maintenance cheaper than it can be obtained in a private cottage, many persons so circumstanced would be disposed to settle under the wing of the Company, could they enjoy the privileges of a separate abode.—So, of two near relations, one of them incapable, the other capable of self-maintenance out of the house; the self-maintaining one, rather than part company, might be happy to accom-

* Cases of peculiar difficulty are apt to be cases of peculiar affliction. To obtain a consultation of three or four physicians, is regarded as no small effort among the most opulent. Among *our* poor, cases of this description will naturally enjoy the benefit of a sort of general consultation, calling forth the united powers of the whole faculty.

† Making the habitations to hold two persons, doubles the quantity of accommodation, with little or no addition to the expense. Taking one of the two for the principal person, and giving him the choice of his fellow-inmate, doubles the value of the habitation, besides the power it confers: an article capable of constituting a valuable *item* in the catalogue of rewards: naming each without consideration of the other, would be little less than destructive of that value.—An aged married couple —a pair of sisters—an aunt and niece—might thus find the principal comforts of home-maintenance, transplanted for their benefit into the Company's demesnes.

The benefit of all this mass of comfort will far outstretch the expense. Hope will multiply it. Each possession in hand will draw a numerous knot of expectancies in its train.

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pany the other to an industry-house, where the faculty of self-maintenance, coupled with the comforts of a common residence, separate from that of the multitude, might still be enjoyed by both. Taking ten per cent. in the way of rent for capital thus invested—taking 20s. a-year, for instance, for a cottage that cost £10—the Company would, in little more than ten years, have reimbursed itself for the expense: at that period it could very well afford to add one out of every two of these rented cottages to the list of *peculium* habitations allowed rent-free. The place of *out-houses* being supplied by the industry-house itself, ten pounds would be sufficient for a cottage capable of lodging two persons without inconvenience. (See Book ii. Ch. iii.) This is according to the London prices. But where brick and lime were to be had upon the spot, or at no greater distance than that of one of the immediately circumjacent industry-houses, and by means of a competent portion of the apprentice strength of each house, bricklayers and other building hands come to be had for 3d. or 4d. a-day, it may be conceived to what an expanse this capital source of pauper-comforts may easily be extended. Is not this rather more eligible than the all-devouring and everlastingly-increasing and encroaching system of pensioned idleness, in a private cottage?

By original property—by savings—by donations, or by earnings while in the house, a man might, after the extinction of his capacity of self-maintenance, possess an income sufficient to maintain him out of the house for a part of the year—for so many weeks or for so many months—though not for the whole of it. Property being preserved to him, as above, a correspondent portion of the summer, which (besides being the pleasantest time, and the best adapted for travelling) is the least expensive, might thus be enjoyed by him in the bosom of his family: the winter part, which is the most expensive, being the part spent by preference in the industry-house.

Section V. *Funds and Grounds of Title in regard to Extra-comforts.*

Funds for the Expense of Extra-comforts.	*Correspondent Grounds, or efficient Causes of Title.*
1. Remains of property.	1. Legal title, confirmed by the indulgence of the Company.
2. Money earnt by this or that individual in the way of encouragement-money, in the nature of a per centage on the value of work done for the Company.	2. Legal title, created by the allowance of the Company.
3. Poor's share in forfeitures, as by the existing law.	*Grounds of title, or claims to the funds 3, 4, 5, and 6.*
4. Existing foundations, and other benefactions for the benefit of parish poor.	*a. Past prosperity:*—especially if accompanied with, *b. Decayed gentility.* *c.* Infirmity particularly severe. *d.* Extraordinary age. *e.* Exemplary character before admission. *f.* Exemplary conduct since admission. *g.* Seniority—claims grounded as above being satisfied, and the general fund not exhausted.†
5. Benefactions by visiters admitted on Sundays and other celebrities.* Book ii. Ch. iv. Book iii. Ch. xii. xiii.	
6. Extra-establishment, instituted by the Company, at its own expense.	

* Necessary admission price very low, that the number admitted may be the greater; but increasable, of course, at the pleasure of the guest.

† All these grounds of claim agree in this, viz. in reducing the number of the claimants, and thereby the expense. Elsewhere, gratuitous bounty would operate, and does operate, and with irremediable efficacy, in relaxation of industry: persons whose cases proved thus distinguished not being excepted. *Here*, no such consequence can ensue. Work, such as a man's faculties are equal to and suitable to, being secured by the regimen of the house:—by the application of the *all-employing* and *earnt-first* principles. Book. ii. Ch. iv.

In the cases of *past prosperity* and *decayed gentility*, (the latter an aggravated modification of the former,) the demand for extra-allowance is the greater, inasmuch as money, or money's worth, bestowed to equal amount on this class as on another, would not be productive of equal comfort: *opinion* having here joined with *habit*, in adding to the mass of wants created by *nature*.

In the case of *infirmity particularly severe*, the demand stands upon a similar, and commonly a still higher footing: the mass of comfort being more depressed by the infirmity, than, generally speaking, it is even in the power of charity to raise it.

Extraordinary age, besides a title similar in kind, though inferior in degree, to what exists in the two preceding cases, possesses this recommendation, that, being independent of human will, it is not capable of being either counterfeited or fabricated, either by study or neglect.

In the case of *exemplary conduct*, whether *before* or *after* admission, the operation of the bounty is better than simply innocent: without doors, as well as in the house, its direct tendency is, to increase the stock of virtue. But to obviate injustice, and the imputation of injustice, and that the quality promoted may not be idleness in the name of virtue, the description of the efficient cause of title in this case should not float in the air, if possible, but ground itself in some specific act or habit: examples of which may be found in the transactions of some of the societies expressly formed for this amongst other laudable purposes.

Where *seniority* is the leading ground, goodness of character should to a certain degree be combined with it. In the instance of a man who stood first in point of age, anything particularly objectionable in his character might be admitted as a ground for

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Funds for the Expense of Extra-comforts.	*Correspondent Grounds, or efficient Causes of Title.*
7. Foundation in favour of this or that class of paupers, by private benefactors. Book iii. Ch. xiii.	7. Donation, confirmed by the allowance of the Company.
8. Private bounty bestowed on this or that individual, in the way of foundation, or casual donation, by an individual friend.*	8. Ditto.

Necessaries, together with the stock of *comforts of course*, ingrafted on them, as it were, by the system of management, being afforded as above, to all without distinction, and provision made for the specific claims just now enumerated, these extra-comforts, and whatever else is beyond necessaries—everything that comes under the head of *superfluity* and *luxury*—however innocent, and how much soever the utmost possible extension of such benefits be to be wished—may be left, it should seem, not only with strict propriety, but with very tolerable security, to rest upon no firmer nor broader basis than that of contingent and spontaneous beneficence. Every indulgence a man is witness to, will either in possession or prospect be his own: and when the difference between prospect and possession is the only difference, inequality, though it were much greater than here, can scarcely be looked upon as a grievance. The real grievance would be, if here, as in other countries, existence itself were to be left to the choice of others, and to chance.

Section VI. *Company's Apprentices—their Condition in Point of Comfort.* The comforts *of course*, which the apprentice class will possess in common with the rest of the population, but to the value of which they cannot, for the want of experience, be expected to be in every instance equally sensible, may be passed over almost without notice.—Of this kind are, 1. Security in point of health. 2. Consciousness of superior probability of long life and health. 3 and 4. Security against want of every kind, and consciousness of that security. 5. Constant cleanliness and tidiness. 6. System of employment favourable to health and recreation. 7. Nights rendered comfortable by separation and cleanliness. 8. Security against annoyance and oppression from fellow-paupers, and especially from fellow-apprentices. 9. Security against oppression from officers.† 10. Sunday enter-

his losing his claim to the species of promotion in question, either altogether, or for a certain number of turns: or even without any specific assignable objection, a man might be set aside in favour of another, who, being in point of character decidedly superior, should happen to stand next in age.

It might operate as an additional security for quiet and respectful behaviour on the part of the paupers towards the officers, individually considered as well as collectively, if a recommendation from an officer (the privilege to be shared by turns) were to be received as a ground of appointment, to such lots of extra-comfort as remained unoccupied by the prior titles above-mentioned.

* The separate possession of one of the outlying cottages, with or without the addition of other articles in the list of *extra-comforts*, would, when *mounted*, as it were, upon the ordinary plan of maintenance, form a comfortable provision for a man to make for a superannuated servant, or other dependant, in a similar line of life. Many a master and mistress would at once be able and glad to do thus much, who, now that there is no other alternative than between the leaving a servant to share in the undistinguishing provision of a common poor-house, and giving him a complete maintenance, does nothing.

† In regard to all these particulars, the lot of the Company's apprentices will show to advantage, not only when compared to the lot of a pauper youth under the existing order of things, but when compared to the lot of a youth of the same age among the superior classes.

In a school, private or public, the quantity as well as species of correction administered, depends—not upon the real demand for correction, but upon the habits and temper of the master and his subordinates. Even in a private family, the mildness or harshness, reasonableness or unreasonableness, steadiness or unsteadiness, of the treatment given to the child, depends in every point on the temper and humour of the parents, or those who stand in the place of parents; on whose part every degree of caprice and tyranny, so long as it keeps clear of injuries threatening danger to life and limb, may vent itself without control. And as to what depends upon the conduct of the youths themselves towards one another, that is, of the stronger towards the weaker, even those great schools which bear the name of *public schools*, are known, perhaps without exception, to enclose an enormous and never-ceasing mass of unobserved and undivulged oppression: one of the first lessons practised in these seminaries being that of enduring tyranny—one of the last, that of inflicting it:—both together conspiring to instil into the susceptible mind an insensibility and indifference to justice. *Here* no instance of any act of authority, or exercise of coercion, on the part of anybody towards anybody, but what will be immediately and universally known;—therefore, humanly speaking, no possibility of abuse.

As to punishments, no act of that kind but will be entered, of course, in the book called the *Punishment-book*, (see Book ii. Ch. x. *Book-keeping*,) and by that means forwarded to the cognizance of the General Board. On comparing the books of the several industry-houses, observation will be made which exhibits the greatest number of instances of punishment, which the least. Compare then the state of these two industry-houses in other respects: observe which upon the whole exhibits the fairest picture. If, in that which has afforded the least punishment, the result should happen to be fairer than in that which has afforded the most punishment, this circumstance alone, without further inquiry, would afford a strong ground for suspicion, that in this abundance of punishment there has been more or less that might have been spared.

I speak of punishment, because punishment is, in the existing order of things, a thing of course. Here, however, how can punishment gain admittance?—

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tainments suitable to the day. 11. The comfort of a clear conscience, brightened by religious hopes, the result of remoteness from temptation. 12. Prospect of melioration of fare. 13. Tranquillity as against the apprehension of change.*

Of the several articles classed under the head of *extra comforts*, (unless perhaps it be such an article as that of a *peculium* garden-plot,) scarce any account need be taken in the case of the present class; partly because they cannot be afforded; partly because, through want of contrary experiences, they would be little relished; partly because, for the same reason, they would be not at all desired.

The comforts of which a distinct mention will be made under this head, accompanied with an indication of their respective efficient causes, as discoverable in the plan of management, are such the value of which, to render it particularly apparent, requires a comparison to be made under the same heads between the condition of these children of the Company, and that of their fellows in age, whether in their own, or in ever so much higher ranks of life.

COMFORTS.	EFFICIENT CAUSES.
1. *Diet.*—No deficiency—no want of the means of health and strength at the ages most apt to be stinted in the economy of the self-maintaining poor: *viz.* all the ages prior to the self-maintaining age.	1. That part of the system of management, which proposes that the allotments made of quantity according to age, should lean to the safe, that is, to the superabundant side; and that which proposes that allotments differing from one another in quantity, shall be made to different assemblages of children of the same age, for the purpose of ascertaining by experiment the most advantageous quantity for each age. Book ii. Ch. vi.
2. No sense of privation: none of the pains attendant on the emotions of regret, discontent, and envy, on that score.	2. Inexperience and ignorance of any fare more palatable than what they possess—the result of that part of the plan of management which prescribes the separation of the apprentice-stock, especially the *indigenous*, and *quasi-indigenous* branches of it, from the world at large. Book ii. Ch. ii.
3. Recreation in the way of bathing (to both sexes.) 4. Security against danger of drowning—by practice and instruction in the art of swimming.	3 and 4. Bath proposed to be made, if possible, in the land attached to each industry house—secluded from the access of strangers; and, by being allotted to the different sexes at different times, and by the constant presence of guardian elders of the same sex, clear of objection on the score of decency.† Book ii. Ch. ii. iii. xii. Book iii. Ch. x.

for from what occasion can it arise? No cessation of inspection, no transgression;—no transgression, no punishment.

If security against everything that savours of tyranny be liberty, liberty, in the instance of this hitherto luckless class of human beings, can scarcely ever have yet existed in anything near so perfect a shape.

But liberty, in a favourite sense of it, means *lawless power:* in this sense, it must be confessed, there will not only be little liberty, but in plain truth there will be none.

* In the instance of St James's, Westminster, a pattern of such good management as is compatible with the existing order of things, observe the expense of boarding the pauper children of the metropolis in the circumjacent villages; 3s. 3d. a-week, besides contingencies. What does all this expense terminate in?—what, in the account that has been published by the institutors of this management, is very justly termed "a dreadful period:"—"The time when these children were to be brought home (six or seven years of age) was a dreadful period to the children, and to the feeling mind."—[ANNALS, xxviii. 167.]—The Company's children have no such period. With them it is all country:—no transition from rural liberty to town confinement.

† Swimming is to most young people a most delightful as well as healthful exercise: whenever it is in their power, they are in general ready enough to avail themselves of it. But for the most part they are debarred from it:—in many instances by the want of water;—in other instances by the anxiety of parents on the score of danger;—in others, by the repugnance of the elder part of the community at large, on the score of decency.

Females are, by the latter consideration, universally debarred from it;—unless it be in very few instances indeed, among the most opulent classes, in which the inducements happen to be strong enough to counterbalance the expense of a retired or covered bath, with suitable attendance.

Removed to a sufficient distance from the house, and secluded from view by proper fences, one bath, used at different times might serve for both the sexes.

The advantage of bathing, with comfort and convenience, is among the attractions that draw the higher classes to what are called the *watering-places;* and such is the activity of charity in this country, that it has even found out a means of displaying itself by facilitating the access to these places in favour of the inferior classes. Against particular diseases, fresh-water bathing is not, it is true, looked upon as standing upon a par with sea bathing; yet even against diseases—to say nothing of general health and strength,—fresh-bathing is not altogether without its use.

The existing charity gives sea-bathing to a few score perhaps in a year; the proposed charity gives fresh-water bathing to some hundreds of thousands of the pauper-community all the year round; and

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COMFORTS.	EFFICIENT CAUSES.
5. Exemption from intellectual exertions of the most painful kind.	5. Exemption from the obligation of learning languages (especially dead languages) by grammatical rules.
6. Comforts of matrimony allowed at the earliest period compatible with health.*	6. Removal of all difficulties and uncertainties with regard to subsistence:—the result of the frugality of the plan of maintenance, coupled with the certainty of giving to the labour of each

for the benefit of the self-maintaining poor all round, every one of the two hundred and fifty industry-houses may be a *watering-place*.

* The maximum of clear happiness is the object, and the sole object, of every rational plan of conduct, public or private.

In this line, as in every other—concomitant and consequent inconveniences out of the question—the maximum of enjoyment gives the maximum of clear happiness. But the longer the *duration* of any source of enjoyment, nothing being lost in other respects, the greater the *sum* of enjoyment: and the duration is the longer, nothing being lost in other respects, the *earlier* the commencement.

Pecuniary difficulties being removed (as they are here) the inconveniences to be considered and guarded against are—1. *Physical*—the danger to health and strength from a too early indulgence, of which, amongst other ill consequences, premature termination might be one:—2. *Moral*—such, if any, as may be to be apprehended from the entering into a state of power, as well as independence, before the intellectual faculties have attained a growth commensurate to that state. Whatever may be the period suggested by a due consideration of the delay necessary to the avoidance of these inconveniences, thus much will not be liable to dispute—viz. that every portion of time, which, without incurring them, might have been passed in the social state, and yet is suffered to pass away in celibacy, is so much lost to happiness.

In the world at large, what may be the average amount of this loss, in the instance of the class in question, is one of the many interesting objects observable in the political line, of which no account, and scarcely so much as any notice, hath as yet been taken. A great comfort is—that owing to causes sufficiently obvious, and which are not to the present purpose—this loss is not quite so high in this lowest and most numerous, as in the higher classes. Yet, even in this class, and in this country, the number of years thus lost, must, upon any calculation, or rather without any calculation, leave a blank much to be regretted in the book of life.

In the proposed order of things, among *our* apprentices—there need be no such loss at all. Regard to health—this one prudential consideration, and this alone, will, in this privileged situation, draw the line. In private life, considerations of the intellectual and moral kind conspire to keep back the period of social happiness. Faculties, moral as well as intellectual, must be ripe for the business of government:—the business not of self-government only, but of family-government. At one-and-twenty, a youth will be allowed to be, in general, alike fit for self-government and for the government of the little family empire: and, whether married or single, it is at this age, and not before, according to the proposed plan, as under the existing order of things, that the management of his conduct will be in his own hands.

In regard to health, at what precise point the line shall be drawn, will be matter of consideration.—It being a point not capable of being determined otherwise than by experiment, it ought to be—it must be—committed to experiment. Nature shows the commencement of the ability—nature shows the commencement of the desire.—How long must the ability continue useless? How long must the desire be a source of vexation, instead of enjoyment?—Questions, surely, not uninteresting—surely, not undeserving of solution!—To give the solution, I see but one course:—to take the visible commencement of physical maturity in each individual for the standard and basis of experiment: from this starting-post to mark out periods of delay—three months—six months—nine months—and so on, for a small—it surely need not be a large—number of years—twenty-one in the male might be the utmost. From thenceforward observe the condition of the classes—see whether there be any and what perceptible differences in point of health and strength, as between class and class.

Fiat lux, were the words of the Almighty:—*Fiat experimentum*, were the words of the brightest genius he ever made. O chemists!—much have your crucibles shown us of dead matter;—but our industry-house is a crucible for men!

"The Chinese (says Sir George Staunton, vol. ii. p. 194, 8vo.) are, perhaps, upon an average, better able to support moderate labour, with little intermission, than many of the lower classes in Europe. They are bred in better and sounder habits, and continue longer under the direction of their parents. They are for the most part sober: they marry early: they are less exposed to the temptations of debauchery: they are less liable to contract diseases which corrupt the springs of life: their lives are more regular and uniform."

And, in another place, (vol. ii. p. 385,) "The marriages in China are, in fact, observed to be prolific, as well as early."

In France,—when France was France,—among the first families in the nation, and in others, as far as economy was supposed to permit, regard to health as well as happiness fixed for the period of matrimonial union the earliest age to which health, regarded in another point of view, was supposed to give a permit for that purpose. Sixteen scarce an early one;—fourteen not an uncommon one. What, under the French monarchy, was the best privilege of the Prince, is in our Utopia the universal lot of the whole community. And to what would they be indebted for this gentlest of all revolutions?—To what, but to economy? Which dreads no longer the multiplication of man, now that she has shown by what secure and unperishable means infant man, a drug at present so much worse than worthless, may be endowed with an indubitable and universal value.

Turn now to the palace, and behold what a fund it affords for pity, when confronted with our industry-house. Princes unmatched, or late matched, or unprosperously matched, or incongruously matched.—Princesses—five remaining—all ripe, but all too high, for happiness.

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COMFORTS.	EFFICIENT CAUSES.
	individual a value secured against depreciation and want of employ, by the principle of self-supply, with a sufficient stock of land for it to operate upon. Book i. Section 6. Book ii. Ch. iii. iv. Book v. Ch. ii. Continuance of the married apprentices under equal subjection before as after marriage, until the age of emancipation—thence removal of the difficulties attendant on self-government at that early period. Right possessed by the non-adult parents of having their children taken care of in the same way they themselves had been, and at the same time in the same house, and under their own eyes.
7. Ulterior prospects—chance of rising to superior stations, by the cultivation of any natural talents that may happen to display themselves—hence hope and emulation.	7. Universal publicity of the conduct of the whole system.—General concourse of strangers expected to each house.—On the part of the officers and their subordinates, opportunities easy, perpetual, and universal, of remarking anything extraordinary that may present itself in the way of natural talent on the part of the apprentices. Appropriate culture of extraordinary talents, should it be thought advisable: and even a system of experiment, for the purpose of bringing latent talents and capacities into light. Book iii. Ch. xii.

Comforts, or other Advantages, applying exclusively to the Female Part of the Apprentice Stock.	*Efficient Causes of the several Advantages.*
1. Security against seduction, and its attendant miseries.—Opportunities of conversation with the other sex, as in well-regulated families, in a safe manner, and at safe times: the degree of safety even superior to anything which commonly is, or easily can be, afforded in the best regulated, and even the highest families.	1. Uninterrupted presence of the governess and her subordinates; also of guardian elders of the proper sex—as before.
2. Preparation for the married state. Instruction and experience in the duties of the house-maid, the kitchen-maid, the nursery-maid, and the sick-nurse, by alternate employment in the performance of the family business of the house, and in attendance on the infant part of the society, and on the sick. Lessons of economy in every branch of domestic management — cooking — warming — lighting — clothing, &c., drawn from the most approved sources of instruction—digested into general rules—and illustrated and inculcated by practice.*	2 Proposed regulations of the house. Manner in which the population of the house is composed—comprising a numerous stock of infants, as well as of the sick and infirm of all descriptions.

This important point duly attended to and provided for (as it easily might, and, after warning such as this, and suitable regulations deduced from it, naturally would be) an inspection industry-house would add to its list of collateral uses that of serving as a *school of domestic economy* for the use of all classes, but more especially for that of the self-maintaining poor.

Works are already in existence, among which Count Rumford's Essays relative to the Poor, are entitled to a distinguished place, in which these principles have been carried to a state very little, if anything, short of perfection, in relation to some of the most important points:—works, and, what is more, practice according to these works,† and these, in exhibiting the

* Partly for want of subjects to practise upon—in some measure, perhaps, from the want of the species of forecast here insisted on—in some very expensive retreats that have been prepared by private munificence for female innocence, the condition of these nurselings, in point of suitable acquirements, at the period of their emersion into the world at large, has been observed (I have been assured) to exhibit but an indifferent result. Pampered, unexercised, and uninstructed in the arts assorted to their subsequent destinations and resources, they make (it is said) but indifferent servants, nurses, or mothers.—A female course of education—a female apprenticeship, excluding from its exercises the characteristic and appropriate functions of the sex, must be a sad education—a sad apprenticeship indeed!

† See Reports of the Society for bettering the Condition of the Poor.

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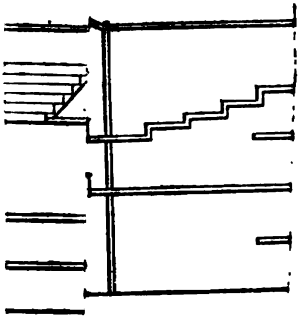

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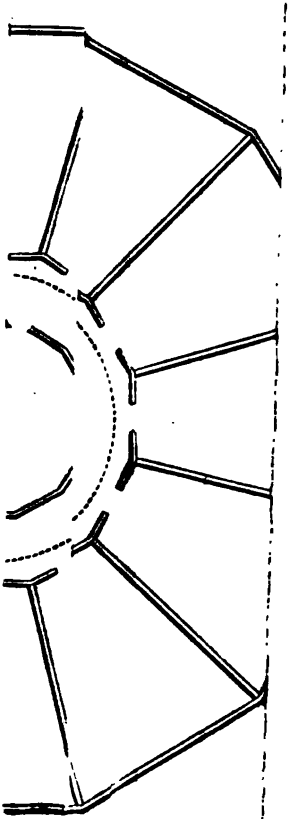

l Wor..., invent.

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improvements that have been devised, show how great the room for improvement is under the current practice.

Compare now the lot of the Company's apprentices with that of any other class of the same age, the very highest not excepted—survey it in its whole extent—probe it to the bottom—and judge whether they are so much to be pitied as to be envied.

Against pains of all sorts, better security than is to be found in any existing situation, without exception.

Desires not crossed, but prevented:—obstacles not moral, but physical;—not terror, but ignorance.

Among enjoyments, the coarser, though more indispensable—(those which attend the satisfaction of the appetites of hunger and thirst)—purified—I mean from pains: the more exquisite—(for I speak of nothing that is not common to the species—nothing that is the peculiar fruit of extra culture in particular minds being to the purpose here:)—the more exquisite, not only in like manner purified, but accelerated:—increased at the earliest and best stage,—at the stage at which their intensity is at the highest:—increased in the only way in which the mass of them is susceptible of being increased.

In the article of diet, no unsatisfied longings, no repinings:—nothing within knowledge that is not within reach.—That he who has been habituated to poignancy and variety of diet, suffers on being reduced to simple and insipid fare, is not to be doubted; but that the enjoyment of him who has never known any sort but one, though it were the most insipid sort, does not yield in anything to that of the most luxurious feeder, seems equally out of doubt:—in this way all the efforts of art are but a vain struggle to pass the limits set to enjoyment by the hand of nature.

*** In the original there is an intimation that the communications are "to be continued;" but though the matter of Books v. and vi. is unsupplied, there are no farther papers on the subject in the Annals of Agriculture by the author. The last of this unfinished series, containing Section 6 of Book iv., as above, is in vol. xxxi. of the Annals, p. 273 to 288.—*Ed.*

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OBSERVATIONS ON THE POOR BILL,

INTRODUCED BY THE

RIGHT HONOURABLE WILLIAM PITT

(WRITTEN, FEBRUARY, 1797.)

NOTE BY THE EDITOR OF AN EDITION PRINTED FOR PRIVATE CIRCULATION IN 1838.

THE "Observations" were written forty years ago, and were recently found amongst Mr Bentham's manuscripts. They have never been printed; but from some correspondence it appears that he was in communication with some of the influential members of the Legislature, and that the "Observations" powerfully contributed to the abandonment of the measure in question.

The provisions of the Bill, as compared with the principles set forth in the "Observations," may be adduced as a specimen of empiric as compared with scientific legislation. To those who may be masters of the principles of the New Poor Law it will be manifest that, had the measures embodied in Mr Pitt's Bill been brought into general operation for any length of time, the effects would have been more disastrous to property, and, through property, to the ultimate welfare of the labouring classes, than the most disastrous revolution in modern times. The New Poor Law is, perhaps, the first piece of legislation based upon scientific or economical principles; the main principle for the administration of the law being, however, a principle which neither Mr Ricardo nor Mr Malthus had seen when they gave the weight of their opinions against the institution of a legal provision for the compulsory relief of the poor. The preparation of the new measure by laborious inductions from a large mass of facts specially examined may be recommended for imitation where safe legislation is required for large subjects.

To those who are unacquainted with Mr Bentham's works, as the greater number even of his professed followers undoubtedly are, (since the best refutation of some of their favourite doctrines are to be found in his writings,) the "Observations" will furnish a fair specimen of his mode of treating such subjects. Another of numerous instances of his great perspicuity for practical purposes is to be found in his plan of frugality banks, published during the year 1798. [See above, p. 409.] In this plan will be found the anticipation of the improvements which some years of trial have suggested in the institution of savings' banks, particularly the addition of the provisions for annuities to the labouring classes, made by the act of 3 Will. IV. c. 14.

7th May 1838.

CHAPTER I.

INTRODUCTION.*

THOUGH no determinate system of arrangement presents itself as having been adopted for the purpose of this Bill, or at least as having been steadily pursued throughout the course of it, the whole matter of it at least may be conceived as distributable under *four*

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* Before I engage in the discussion of particular clauses, I find it indispensably necessary to state an apprehension I have throughout been labouring under; the apprehension of doing an unintentional injustice to the Bill by mis-stating from time to time the intended import of it. The truth is, the degree of difficulty I have experienced in the course of my endeavours to comprehend that import, has

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heads or compartments: *one* part taking up the *out-allowance* or *home-provision* system, and opening new sources of relief in that shape; a *second*, taking up the *home-provision* system and the *small** *establishment* system jointly and in a system of working places under the names of *Schools of Industry*, establishing throughout the southern division of the united kingdoms a system of employment and industrial education, of which the scene is to *shift* in a manner between the public *school*-room and the private *home*; a *third* occupied in establishing a system of *superintendence* to watch over the management of these schools of industry; and the *fourth* taken up with a set of regulations in the way of *procedure* and a few other arrangements of a *technical* nature, such as it is commonly deemed necessary to tack to the end of statutes creative of new powers to be exercised by particular authorities.

On looking into the portion of matter relative to the subject of *home provision*, we shall find it distinguishable into two main divisions: the one occupied in the distribution of *occasional* or *temporary* allowances; the other in giving commencement or security to a system of what may be termed *superannuation annuities*, humanely destined to diffuse a gleam of comfort over the evening of life.

On looking into the amendments applied by the *Bill* to the plan of relief afforded by the *home-provision* system in the *present* state of the law, we shall find them introductive of the following *extensions:*

In Section 2, a *supplement* is meant to be provided for whatever deficiency, in point of *earnings*, may result from any deficiency in point of *ability* with reference to work. This clause I shall take the liberty of distinguishing by the name of the *under-ability*, or *supplemental-wages* clause.

In Section 1, another supplement for whatever deficiency, in respect to the means of maintenance, may be produced in families by an *overcharge* of helpless *children*. This may be termed the *family-relief*, or *extra-children* clause.

In Section 3, power is given (to whom not mentioned) to administer relief in the shape of *capital*, to be employed in the purchase of "a cow, or *other animal yielding profit*." This may be termed the *cow-money* clause.

In Section 4, a provision is made that property, "visible property," though it amount to £30, or perhaps more, shall not operate in *exclusion of relief*. This may be termed the *relief-extension*, or *opulence-relief* clause.

And in Section 23, provision is made for conferring on the scholars of these schools, in certain cases, the benefit of *apprenticeship* at the public expense. This I shall term the *apprenticeship* clause.

I shall now consider the several clauses in the order in which they have just been brought to view.†

CHAPTER II.

1. *Under-Ability, or Supplemental-Wages Clause.*

"LIV. And be it further enacted, That if any poor person residing in any parish under the authority of this Act, and not being able to earn the full rate or wages usually given in such parish, or the parish or parishes united therewith, shall, with the previous consent of the person or persons appointed to the management of the poor of any such parish or united parishes, contract and agree to work at any inferior rate or wages, which wages shall not be sufficient for the maintenance and support of such poor person singly, or in conjunction with his or her family, it shall and may be lawful for such officers of the poor, with the approbation of one or more justice or justices of the peace in the district, to make up such deficiency as may be necessary for the support of such poor person, and his or her family, (regard being had to the earnings of such family,) out of the rates made for the relief of the poor, without compelling such poor person to be employed in any school of industry, or in any other manner under the authority of this Act."

been as extreme as those endeavours have been sincere. Whatever, therefore, is herein advanced as conveying my own sense of the import of the Bill, must be understood to be submitted all along to correction—to whatever correction may be thought fit to be administered by stronger minds.

* So termed here, in contradistinction to the *large-establishment* system, by which is meant that branch of the *public-establishment* system as contradistinguished from the system of *out-allowances*, according to which the establishments would separately considered be upon a *large* scale, such as that of a *country* workhouse, or even a system of workhouses, of which *four*, suppose, should be allowed to a county upon an average.

† In the Bill itself the sections are not numbered; it is not the usage: sections are never numbered either in an Act (I speak of the authentic manuscript) or in a *Bill;* I have taken upon me to number them at a venture, knowing no other means of distinguishing them in the way of *reference*. My principle of distribution has been the recurrence of the introductory surplusage, "*and be it further enacted*," coupled with the consideration of those discontinuances or breaks in the line of text, which are the mechanical result of the operations of the press.

This privation of the physical possibility of becoming the subject-matter of reference; this prolific cause and certain pledge of uncertainty, disorder, and inconsistency, each in the extreme; this privation of one of the many helps to intellection, the exclusion of which is peculiar to that species of composition in which the importance of the qualities of order, precision, and conciseness, stands at the very highest pitch; this deficiency, if it be a fault, is not the particular fault of *this* Bill or of any one concerned in it. It is the fault of *everybody*, and thence of *nobody*. [See Nomography, vol. iii. p. 233. It has of late become the practice to number the sections of Bills.—*Ed.*

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By the *under-ability*, or *supplemental-wages* clause, provision is made that "if any poor person entitled to the benefit of this Act," (the *efficient cause* of *title* is not otherwise specified,) "not able to earn the full rate *or* wages, shall agree to work at an under rate, the deficiency may be made up to him out of the poor rates, *without compelling such poor person to be employed in any manner under the authority of this Act.*"

What sort of persons this class is intended to be composed of is a question respecting which I must confess myself unable to satisfy myself, not being able to collect who the persons are "*entitled to the benefit of this Act*;" thus much, however, I understand from the clause, that there *is* a class of persons to every one of whom, upon condition of their working in any manner, and receiving for their work a rate *or* wages *falling short* to any amount of the "*full rate usually given in the parish*," *somebody* or other (I do not perfectly see who) shall have it in his power to make up the deficiency at the *public* charge.

The inability of the lowest class (I mean the worst paid class) of working hands in this country, viz. the *labourers in husbandry*, to make such provision for the sustenance of themselves and families as shall be *constantly* adequate to the purpose,—that is, under every variation which the *ability* as to *work*, the *facility* of *obtaining* work, and the *magnitude* of the *burden* resulting from the *condition* and *multitude* of the *infants* and other *helpless* branches of the family are susceptible of,—is a point which I *fear* has been but too incontestably established.*

To this inconvenience such remedies as in the course of the preceding observations presented themselves as the proper and only proper remedies, have already been pointed out. The remedies proposed by the Bill in general, and the part now in question in particular, must be confessed to be of a different stamp.

As to the casual *inadequacy* of the *earnings* of the individual compared with the *demand* for *subsistence* on the part of that same individual, two expedients have presented themselves: one is to *fix* the rate of *wages*, and thereby of earnings, viz. of the rate to be paid to individual labourers by *individual* employers; the other is leaving the rate indefinite, to make up the deficiency, whatsoever in each individual instance it may happen to amount to, at the *public* charge.

The fixation of wages is an operation which on different occasions has been *proposed*, and on some occasions even *practised* with opposite views,—to prevent what has been looked upon as *excess*, and to cure what has been looked upon as *defect*. It is with the *latter* view that it has lately been proposed with reference to the case now before us.

Against the fixation of wages with a view to prevent *deficiency* there is, however, this objection, viz. that thereby you *exclude* from employment many persons who might otherwise have obtained it. You *aggravate* the distress of the *very persons*, or at least a considerable proportion of the persons, whose condition you propose to *meliorate*. What you *can* do (let it be admitted) is so to order matters in behalf of the object of your benevolence, that if he receives *anything* he shall *not* receive *less* than what you *wish* him to receive; but what you *cannot* do is so to order matters as that, under *these* circumstances, he shall receive anything at all. To *give* him that sufficient rate of wages is an obligation *not* imposed upon *any* employer whatsoever; it is therefore an expense to which no employer who does not think he shall find his account in it, will ever think of subjecting himself.

In a word, a regulation fixing the rate of wages so as to prevent its falling below a certain rate, is, in effect, a regulation of the prohibitive kind, excluding from employment all such hands the value of whose labour does not rise to a *level* with that rate; a prohibition enforced by a specific and unavoidable penalty, and that penalty is the *difference* (whatsoever it may be in each case) between the *highest* sum which the labour of the *workman* is worth, and the *lowest* sum which the *employer* is allowed to give.

True it is that, upon a *minute* scrutiny, the exclusion will not be found altogether *so* universal as at *first* glance it might appear. In some instances (partly from motives of a *personal* nature under the difficulty of getting another hand, but at an extra price, partly from motives of *compassion*, rather than have an industrious workman destitute) an employer, who otherwise might have got the labour of the *feeble hand* in question at an under rate, proportioned to his diminution in point of ability, will pay him that *full* and intended *legal* rate which, with reference to that ability, will be an *extra rate*. But the effect of the principle thus operating in limitation of the exclusion has its bounds. An employer *may* give 9s. a week, for example, to a labourer whose labour is worth but 8s. or 7s., but he will not give the 9s. to a labourer whose labour is worth but 3s. or 4s. He will rather give for his 9s. worth of labour 10s. or 11s. or 12s. to *one* workman in full ability, (importing him, if necessary, from another parish,) than 27s. among *three* labourers whose labour taken altogether is worth no more than the 9s.

Besides the *general* danger (the danger of idleness) inseparable from the *home-provision* system, a *particular* source of danger seems to be opened by the particular wording of this clause. By his character for negligence or idleness, a man, though in respect of *ability* not *unequal*, perhaps, to the *fullest* rate of earnings, shall have so ordered matters that no *master* will employ him but at a rate more

* Particularly in the case of labourers in husbandry, by the Rev. David Davies, 1795, 4to.

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or less *inferior* to that rate. In that case it will be perfectly true that, to use the words of the Bill, he is "*not able to earn the full rate or wages usually given*:" for, whatever may have been the *original cause* of the inability, the *existence* of it is not the less real. So far, then, as this cause of inability extends, that is so far as the class of the *idle*, the *negligent*, and the *dissolute* extends, (a multitude, the increase of which seems but too much to be apprehended from the operation of this clause,) the effect of it seems to be the putting the *idle* and *negligent* exactly upon a footing in point of prosperity and reward with the *diligent* and *industrious*.

If conjecture may be allowed, the circumstance that gave rise to this clause in the breasts of those who framed it seems to have been the humane consideration that, when a man does his *utmost*, it is *hard* to leave him in a worse condition than his neighbours on account of an infirmity which is his *misfortune* merely, not his *fault*. But the extreme difficulty of forming in each individual instance a well-grounded judgment (to whomsoever it belongs to form it) in the question *fault or no fault*, and if fault, in what degree, may, perhaps, by this time have been perceived. But *fault will* not, *ought* not to be, imputed without special and full proof: and, perhaps, the blameable conduct, the blameable cause of the inability, the *bad character* in which the inability to obtain the ordinary rate of wages originated,—this cause, though continuing and operating in full force, is susceptible of no *proof* but what is confined to a period long since *past*. This being the case, and supposing all possible ability as well as integrity on the part of those by whom the claim to this bounty is to be determined, I must confess I do not see how it can be otherwise than a *frequent*, not to say *general* case, that *idleness* should, upon the establishment of this clause, find itself in as *good* plight as *industry*.

Under this difficulty of drawing the line, an expedient which I must confess I expected to have found adopted, was the *confining* the *title* to some such *efficient cause* or causes as should be out of the reach of *counterfeiting* as well as of fabrication; old *age* stands in this respect on the *highest* ground in point of eligibility; after that come specific modifications of infirmity, such as loss of limbs, loss of the use of limbs, rupture, epilepsy, nervous afflictions, complaints which, according to the greater or less *difficulty* of *ascertaining* the *matter of fact*, will constitute so many efficient causes of inability more or less clearly, and certainly *exempt from blame*—more or less exempt from the danger of opening an inlet to *abuse*.

Whether all the ~~precautions~~ that *could* be taken, all the precautions which the nature of the case admits of, would be sufficient to confine the mischief within any tolerable bounds, is what I cannot but entertain some doubts of; but at any rate so long as no such checks are applied, the danger from this clause, supposing it to stand, seems very serious; for how opposite soever the views and intentions of the contrivers in the two cases, the *equalization system*, as applied to *wages*, seems hardly less threatening to *industry*, and thence to *property*, (to say nothing of the *expense*,) than, as applied to *property*, it would be to *property*, and thence to *industry*.

Against these and all other dangers of abuse the dependence for a remedy and safeguard is of course on the wisdom and integrity of those into whose hands the *execution* of the Act may come from time to time to fall: but, (not to mention how multifarious the ingredients *sine quibus non* of the mixed class called *wisdom* are,) *wisdom* may be wanting in *one* quarter, *integrity* in *another*, both together in a *third*, and after all we know not who they are. Besides that, as we have seen, the cases are various and of frequent occurrence where the union of *both* qualities, and *both* in the highest degree, would be of no avail. To oppose *all new* powers on no distincter ground than that *all* powers are open to abuse, would be the effusion of *undistinguishing* imbecility or of political *jealousy* run mad. But when a system of provision is on the carpet, involving in its essence a system of powers *particularly open* to *abuse*, the danger may at least operate as a motive for *inquiry*, whether there may not be found some *other* system less obnoxious to abuse.

What, in such case, shall be deemed this "*full rate or wages*," which is to be made up at all events is another point that seems as necessary as it may be found *difficult* to be settled. In the compass of *England* and *Wales* some hundred thousands a-year may be at stake upon this single point. 1. Is it the full rate or wages of the *highest paid* species of labour in the district in question? Certainly not in *every* case. 2. Is it the "*full rate or wages*" of the highest paid species of labour where the employment of the *individual* in question happens to be of that species? If so we may have bad *ship-wrights* pensioned at 9s. a-week or a guinea, (according as day work or piece work is taken for the standard,) or bad *mathematical instrument* makers at half as much; *this* therefore was not intended. 3. Is it the "*full rate or wages*" according to an *average* taken of the earnings of *all* the species of employment exercised within the district *put together*? This, requiring a vast previous assemblage of *highly interesting* but hitherto *uncollected* documents, is what (for that as well as other reasons) can hardly have been intended. 4. Is it the "*full rate or wages*" *earned* in the species of employment *most abundant* in the district, as the words "*usually given*" might seem to import? I should suppose nor *that* neither. 5. Is it the "*full rate or wages*" earned in the lowest (meaning the *lowest* paid) species of employment therein exercised? This I should *rather* think is what is meant, (or at least *upon this view* of the

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diversity would be meant,) because this construction would be the *least dangerous;* but this is not anywhere *expressed.*

Take even the *lowest paid* species of employment, the *quantum* of the earnings will be found to admit of great variation in *great towns* (the metropolis for example) compared with *distant country* places. There are country places in which it is not higher than 1s. a-day; in London and the neighbourhood it can hardly be reckoned lower than 2s. With all this enormous difference in the *habitual* rate of *supply* the *necessary* means of living are scarcely cheaper anywhere than in London. Are so many thousands of bad workmen then, with or without families to receive near £32 a-year as a *minimum*, when less than £16 a-year is proved by experience to be enough for good ones? And who will stay in the country at single allowance if he can secure *double* allowance only by coming up to London, which partly by a late Act, partly by this *intended Act*, everybody is enabled to do without disturbance?

An answer is, that as at *present* and in practice necessity is *measured* for the purpose of *relief*, so in future and *under this Act* will wages be measured for the same purpose. The reply is, *no such thing.* As far as the intended law is *obeyed*, as far as it produces the effect it aims at, the measure at *present*, used for this purpose will *not* be employed but *laid aside.* Under the *existing* order of things the relief granted *is* measured by and adjusted to what (in the breasts of those to whom it belongs to judge) *is* the proper *quantum* of the demand on the score of indigence. But this mode of measurement is precisely that which will *not* satisfy the liberality of the framer of the Act, for this is what the Act declares, if it declares anything. *Full* is a word not only of precision, but of *energy.* The "*full rate,*" that and nothing less, is the rate without which the legislator has declared he will not in *future* be satisfied; and whosoever presumes to give less than that full rate *disobeys.* That such disobedience would not be uncommon is what I will not say either *I should hope* or *I should fear*, but what at any rate I should *expect.* But where would be the expediency of that law of which the sole trust were to be in the disobedience it might excite? Meantime disobedience, eligible or ineligible, pardonable or unpardonable, will not be *universal. Five* standards (as we have seen) for the measurement of the bounty, five standards rising one above another in liberality, will be in every parish open to a man's choice. In each instance, be his *inclinations* what they may, ever so *weak*, ever so *lavish*, ever so *heedless*, within the prodigious scale raised up by these five standards, a man may without much straining find a warrant in this part of the intended Act; but at any rate, to one or other of them he *must* conform himself if he pays any regard to the Act: —five standards, the lowest of them little less than sufficient, as we have seen, to double the poor rates, overwhelm the metropolis, and depopulate whatever part of the country is not covered by a town.

CHAPTER III.

2. *Family-Relief, or Extra-Children Clause.*

"XXXVII. And be it further enacted, That any father entitled to the benefit of this Act, and having more than two children under the respective ages of five years, and part of his family unable to maintain themselves; and any widow being so entitled, and having more than one such child, and part of her family, shall have such allowances from the parish or united parishes where he or she shall reside, in respect of all such children of such father beyond the number of two; and in respect of all such children of such widow beyond the number of one; to such amount as the person or persons appointed to the management of the poor of such parish or united parishes, with the consent of the visiters of the district in rotation or any two of them, shall deem sufficient for the maintenance of such child or children under all circumstances, or as two justices of the peace in the district on appeal from the allowances made by the consent of the said visiters, shall order and direct; and that such allowances so made shall continue in respect of such child or children above the number of two and one respectively, until such child or children, in respect of whom such allowances are made, can and shall maintain themselves by their labour; and that all and every the child or children of any such father or widow being respectively of the age of five years or upwards, in respect of whom any such allowance as aforesaid shall be paid, shall, upon request made in pursuance of this Act, be sent into the school or schools of industry established in or for any parish or united parishes, and shall be received into such school or schools of industry to be instructed and employed in such business as shall be suited to the age and strength of such child or children, and not dangerous or prejudicial to the health of such child or children, unless the parent or parents of him, her, or them, will undertake diligently to instruct and employ, and shall diligently instruct and employ such child or children at their own homes in such business as the person or persons appointed to the management of the poor of such parish or united parishes, or the manager of the said school or schools of industry, shall from time to time direct; and which such persons respectively are hereby authorized to direct to be done in conformity to the provisions of this Act, and that such allowances so directed shall continue to be paid until such respective children can maintain themselves by their labour,

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and that the earnings of every such child, to whom any such allowance shall be directed to be paid, except such part thereof as is hereinafter directed to be allowed to the parent or parents of any child or children who shall be industrious and conform to the rules established by or in pursuance of this Act, shall, during the continuance of the same, go in aid of the fund for the support of the said school or schools of industry; and that any child or children whose parent or parents is or are not able to maintain them, and in respect of whom no such allowance shall be paid or payable by virtue of this Act, may be received into such school of industry, to be therein instructed and employed in such work or employment as shall be suited to such child or children as before directed, or in such other place and under such instruction as shall be agreed upon in the manner before directed, and under such terms and conditions or at such rate or wages, as shall, in pursuance of this Act, be settled to be paid and performed in consideration of the work done by such child or children; and the earnings of such last-mentioned child or children, except such part thereof as shall be allowed as aforesaid, shall go in aid of the fund for the support of such school or schools of industry."

In this Section (clause 1) two classes of persons are instituted, who, on the condition of their respectively having a certain number of children, parts of their respective "*families, and unable* to *maintain themselves*," shall be entitled to a weekly allowance, considered in respect to its *quantum;* this allowance is *not* to amount at any rate to *less* than 1s. a-week for each *extra child,* and it may amount to ever so much *more.* Considered in respect to its *duration,* it is to continue not only till each such extra child shall be *able* to maintain itself by its own labour, but till it *actually shall* maintain itself by its own labour,—"*can* and *shall* maintain themselves by their labour," says the Act.

1. Measuring the extent of this clause, we shall find it, I much fear, at once too *ample* and too *narrow:* too ample to be reconcileable to the interests of private industry or of public economy; too narrow to cover the extent of the *demand* for the relief which itself provides. To judge of the demand in point of *necessity* and *utility* for the *bounties* given by this clause, let us observe upon what footing the *title* to *relief* stands under the *existing* order of things. At present, supposing the *discretion* properly and successfully exercised, *demand* and *supply* are proportioned to each other: from those who have *not* wherewithal to maintain themselves and families, be those families ever so *small,* relief will *not* be *withholden;* to those who *have* wherewithal to maintain themselves and families, be those families ever so *large,* relief will *not* be *given.* Under this clause a family may labour under the severest *distress,* and derive *no* benefit from the intended Act. A family may wallow in abundance, and derive an enormous pension from it. To entitle the head of the family to the allowance—to the pension or congeries of pensions thus provided, it is not necessary that the family *taken together* should be unable otherwise to maintain itself. It is sufficient if the *extra children,* the children taken in the extra number, should, *separately* taken, be unable to maintain themselves. The heads of families in question as described are, first, a *father* having more than *two* "children unable to maintain themselves;" and, second, "a *widow* having more than *one* such child." As to the difference made here between *fathers* and *widows,* that in general the *ability* of the *male* sex in this respect will be greater than that of the *female* is not to be disputed. But will it in *every* instance be exactly in that proportion? May not there be some instances in which a *woman* with a *good* trade will be better able to maintain *two* children than a *man* to maintain the *same number* with a *bad* one? May not the instances be *many* in which a *man* with or without a *wife* shall be better able to maintain *three* children than a *widow* to maintain *two?* And may not there be instances where a widow with *two* children shall be better able to maintain herself and family, than a widow left pregnant for instance with *one* child in arms, or in a state requiring still more attendance, may be able to maintain herself and *that one?*

Doubts remain with regard to the *import* that are material to the *effect.* This inability with regard to the maintaining themselves, is it *sufficient* if it extend to the *supernumerary* children, or *must* it extend to all the children? And in either case is it *sufficient* if it be *partial,* or *must* it be *entire?*

2. As to the *quantum* of the pension. Under the *existing* system if 6d. a-week (for example) per child be *requisite* and *sufficient* to make up for the deficiency of earnings, 6d. a-week *may,* without any further addition, be allowed. Under *this* Bill 1s. a-week, requisite or not requisite, *must,* if *anything,* be allowed. Shillings in any number *may* be allowed, and that more than one *should* in *general,* or at least *frequently,* be allowed, seems to be intended: for that *less* than 1s. requisite or not requisite should not in *any* case be allowed is *expressly* stipulated. A shilling a-week is £2, 12s. a-year; 6d. a-week is £1, 6s.; 9d. a-week is £1, 19s.; 3d. a-week is 13s. Thirty-nine shillings, (almost £2 a-year,) or even 26s., or even 13s. a-year, repeated upon forty or fifty thousand children, amounts to no small sum. Granting (what is a good deal to grant) that less than the shilling a-week cannot in *any situation,* or at *any age,* be made to suffice for the maintenance of *any* child,—what cannot *possibly* be granted is, that this deficiency in the amount of earnings cannot exist in the shape of any *less* sum than the *entire amount* of the sum necessary for the child's maintenance. In situ-

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ations where money is oftener reckoned by millions and thousands than by pounds and shillings, the saving that might be made upon a pitiful shilling a-week is apt to appear as nothing; but where a penny comes so often to be repeated, an error to the amount of a few pence in this *low* pension-list may amount to a source of profusion not only more abundant in *quantity*, but much less warranted by use as well as much more pregnant with *mischief*, than even the *high* pension-list which is the object of so much jealousy as well as so much envy.

3. The *duration* of the allowance presents another topic of observation. The continuance is to be until the children in question actually "*shall maintain themselves by their labour*:" while their earning anything will depend of course upon the head of the family, who, through wilfulness, or negligence, or indolence, may keep the children either in *idleness* or employed in *labour*, which, however useful to the family, *cannot* or *need* not be brought to account in the shape of a *fixed sum* so long as the allowance, excessive or moderate, is to continue.

The maintenance, it may be said, will be afforded, and that in the fixed shape in question, by the wages which the child will receive for the work which the head of the family must send the child to perform at the school of industry on pain of receiving none of the *benefits of the Act*. It *may* be so; but, however, it *may* be *otherwise*. The children may, some or all of them, be under the age, (five years is the age at which this schooling is to commence, sec. 20.) In a thinly-peopled part of the country the burthen of the school, with its *schoolmaster* and *schoolmistress*, and *warehouse* and *warehouse-keeper*, will, if the parish be *single*, be by far too heavy for it: if several parishes are put together, the school, put it *where* you will, by its distance will be rendered inaccessible to a great part of its scholars. The pensions are to commence in July next, (Sec. 1, 67.) Not a school can be begun to be built till at the *end* of a *chain* of administrative operations, such as in known instances has taken up *years*, and of which the first *link* cannot take place till *after Michaelmas*, (Sec. 10,) and it is in aid of the "*fund* for the support of the *schools*," and *not* in aid of this *pension-fund*, that the earnings, whenever they *do* take place, are after all to be applied.

A circumstance that renders the danger the more formidable is, that the *two* currents of profusion, the allowance on the score of *extra children*, and the allowance on the score of *supplemental wages*, may, for anything that appears to the contrary, mingle *together*, and flow with *united force*. First comes the *pay* of the *idler*, made up to an *equality* with the *earnings* of the *industrious*; then come the *extra children* of the idler to be put in whatsoever number upon the *pension-list*.

"Regard" (it is provided) shall be "had to the earnings of the *family*." Regard (it is provided) shall be had to the allowance from a fund, not named, but which appears to be what I call the *superannuation* fund; but of any "*regard which may be had*" to any such allowance as that on the score of *extra children*, no mention is to be found. No deduction is, therefore, *intended* to be made on any such score.

The over-narrowness of the provision with reference to its evident object, the *scantiness* of it in a particular point of view, comes now to be considered. To characterize the *head* of a family on whose labour the subsistence of the family is considered as depending, "*father*" if of the male sex, "*widow*" if of the female, are the only terms employed. But there are *other* relations which are either *charged* by *law*, or at least apt to be *engaged* by *shame* or *affection* in the maintenance, or at any rate in the *guardianship* of their infant or OTHER HELPLESS relatives. Within this sphere of duty, perfect or imperfect, (for I will not plunge into discussions of *positive* law for the purpose of drawing the line,) *grandfather* and *grandmother*, *brother* and *sister*, *uncle* and *aunt*, may at any rate be considered as comprised. In whatever point of view the matter be considered, if the claims of the *two* relations *specified* are to be regarded as *strong enough* with reference to the intended bounty, those of the six relations *not specified* present themselves as *still stronger*.

In the instance of these comparatively distant relatives, if *bound* by law, the *burthen* of the *obligation*, unaccompanied as it is in their case with those matrimonial comforts which constitute the equivalent for parental burthens, is so much the *harder*: if *not bound*, the act of *taking* up the burthen is so much the more *meritorious*, and stands so much the more in need of foreign inducements to give it birth.

To give *consistency* to the provision by the *supply* of these *omissions* is a task which, though certainly *not impracticable*, would be found *not unaccompanied with difficulty*, and if the *expediency* of the provision considered in substance be liable to *doubts*, this *difficulty* will add *force* to them. *Complication* is of *itself* an evil, and *such* an evil as requires no inconsiderable mass of *benefit* to *outweigh* it.

CHAPTER IV.

3. *Cow-Money Clause.*

"LXVII. And be it further enacted, That whenever any poor person entitled to the benefit of this Act, shall want relief for himself or herself, or his or her family, and such person shall be possessed or can obtain possession of land, or is entitled unto common of pasture sufficient to maintain a cow, or other animal yielding profit, whereby such poor person by care and industry might, in addition to their other earnings, acquire a competence to main-

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tain himself or herself, and his or her family without further parochial relief, it shall and may be lawful for any two justices of the peace in the district, on the recommendation of the persons appointed to the management of the poor in such parish or united parishes aforesaid, and of two of the visiters of the district in rotation, certifying that such person is of good character, and that, in their opinion, an advance in money for the purpose mentioned in the said certificate (and which purpose shall be set forth in the certificate of such persons appointed to the management of the said poor) might tend to increase the income of such person, and thereby ultimately tend to diminish the parochial burthens, and which certificate shall be in the form No. , in the Schedule hereunto annexed. And which justices are hereby authorized and empowered, on receipt of such certificate, and on due consideration, to order and direct the payment of such money in advance, as in the judgment of such justices will be necessary for the purchase of such cow or other animal, or to direct security to be given for the rent of such land, and which money so to be allowed shall not exceed what shall be necessary to increase the income of such person by the profits to arise therefrom, to the amount to which such person would be entitled to relief for himself or herself, or for his or her family."

I now come to the cow-money clause. The *benevolence* which suggested this clause is expressed in the most conspicuous characters; on the question of *policy*, the following observations have presented themselves.

Hitherto the danger of profusion has confined itself to *income*: it now threatens *capital*. In the *preceding* clauses the allowances authorized, how much soever too ample, continued to be, as they are under the existing system, in the first instance occasional only, at the worst gradual, accommodated as to their rate of efflux to the influx of the fund from which alone they could be derived. Here *capital* is given under the very *name* of capital, and as a substitute to income. The pension *during pleasure* is instantly converted into a pension *for years* or *during life*, and that pension *at the same instant* bought out by a *gross* sum, leaving the demand for a *fresh* pension to recur at any time, to be again bought off, and so *toties quoties*. The spigot was *there* opened, *here* the bung-hole.

It would be *something* in the way of security, though surely not much, if the cow were but safely lodged in the cow-house of the indigent to whom the possession of her is to be an inexhaustible spring of affluence. But even *this* security, slender as it is, is not provided. The capital is to be advanced, not in the shape of the *cow*, but in the shape of *hard money*, with which the object of this extraordinary bounty is left perfectly at liberty to lay in a fund either in *milk* or *gin*, according to his taste.

The cow *dies* or is *stolen*, or (what is much more likely) is *supposed* to be stolen, being clandestinely *sold* to an obliging purchaser at a distance. What is to be done? "*Want of relief*" warranted the *first* cow; the same cause will necessitate a *second*—limit who can the succeeding *series* of cows: The disappearance of the *first* cow (it may be said) will excite *suspicion;* the disappearance of a second cow will *strengthen suspicion;* true, but upon a mere suspicion without *proof* will a family be left to *starve?* The utmost security then amounts to *this*, that to a certain number of successive pensions thus *bought out* will succeed a pension which will *not* be bought out.*

By donations or loans of this sort, made by gentlemen, of high amount to deserving individuals, selected from such of their tenants or dependants as have been fortunate enough to be comprised within the circle of their notice, *good* is said to have been done in certain instances. I make no doubt of it. Milk is a wholesome as well as pleasant beverage; milk is particularly good for children. Thirty pounds, twenty pounds, or even ten pounds, cannot but form a very comfortable accession to the property of an individual who happens at the time to be suffering under the pressure of indigence. When at his *own* expense a man administers charity in so large a mass, it would be extraordinary indeed if he did not pay a *considerable* attention to the propriety of the application of it; and should the *object* prove *less deserving* than was supposed, or the *benefit* less *permanent* than was hoped, there is at least no *immediate perceptible* harm done to any *assignable* individual. But while the hands by which the bounty is to be dealt out remain in the clouds, or were they even lying upon the table, it seems rather too much to expect *equal* attention, or even in general *sufficient* attention, when the *praise* and the *thanks* are reaped by the hands which thus disseminate the bounty,

* The *quantum* of the capital thus to be hazarded is no light matter. A friend of mine, who at this present time happens to be looking out for a cow, assures me he can hear of no animal of that kind to be sold for less than £30 that can be depended upon for giving milk sufficient to pay for her keep, for "*yielding profit*," to use the expression in the Bill. The *time*, it is true, is a dear one; and the *place*, the vicinity of the metropolis. But to this purpose, within what may be termed the *vicinity* of the metropolis, a circle of at least twenty miles radius must surely be comprised. A cow which is worth £30 in the heart of this southern division of the two united kingdoms, can hardly be worth less than £15 at the very furthest extremity; because a difference much less than that of £15 a-head would, upon a very moderate number of cows, abundantly pay for the expense of driving them up to London, from even the most distant parts of England. This £30 price (let us hope) will not *always* continue; but at the most favourable season, should it fall to £20, the reduction will be full as much, I fear, as can reasonably be expected.

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while the *burthen* of it rests on the shoulders of *third persons*.

Over and above the general love of *popularity*, motives of a more personal nature may intervene, and that most naturally and frequently to no such light amount. A man to all appearance wanting "relief" for "*him*"... "self" or *his* "family," and who to all appearance "would be enabled by the advance of money for purchasing a cow" "to maintain him"..."self" and his "family" without further "parochial relief," may, besides being to all appearance a very industrious and deserving man, have the good fortune to possess a *vote*. No matter what the situation, high or low—parliamentary or having nothing to do with parliament, for a county, for a borough, or for one of those situations which gives votes for boroughs. If he *himself* does not possess the vote, the father, or his son, or his brother, or the father or brother of his wife or sweetheart may, which may come to much the same thing. To any man thus circumstanced (and the multitude of men thus circumstanced is not likely to be small) this *cow-money* clause will be a matter of particular convenience. To give the value of a dinner to such a purpose might be an act of imprudence as well as a matter of expense, and as (experience has shown) might be fatal to the cause. A bounty for good votes, a bounty to the amount of £10, as we have seen, or £20, or £30, might, under favour of this clause, be given with the most perfect safety, and without a farthing expense.

It is the *profusion*, I must confess, that frightens me; the topic of *corruption* I leave to more brilliant pens. Figures of arithmetic, and not of speech, are the figures that govern me. Standing even upon this frigid ground, I can see no bounds, I must confess, to the profusion, where the incentive remaining in full force, the main checks, all the checks which preserve any tolerable uniformity of operation, are thus to be taken away.

Even the *shape* of the bounty seems to my unfortunate apprehension as objectionable as the *quantum* of it. If the £10, or the £20, or the £30, *must* be given, I had rather have seen the disposal of it left altogether to the dispensing hand than clogged with the condition enforced or not enforced of converting it into a *cow*.

1. A resource which is to supply a *permanent* deficiency *should* be permanent as that deficiency. Here the deficiency is deemed *permanent*, since an *occasional* or *temporary* allowance is deemed inadequate to the supply of it. The probable remainder of the life of a cow, already in a condition to yield an annuity in the shape of milk, is limited, sickness and casualties apart, to about eight years, after which she may sell for about half price.

2. A resource which is to supply a permanent deficiency should in the variations, if any, to which the amount of it is subjected or exposed, *keep pace* with any variation in the deficiency, or, if that cannot be, should remain *constant* and *invariable*, so as to afford a solid ground of dependence without any *partial*, much less *total*, cessation during the period that the demand continues in *unabated* force. But the annuity paid by a cow undergoes a necessary suspension,—frequently of four months' continuance, never of less than two months,—average, (say) three months, or a quarter of a year.

3. A supply allotted as a resource to indigence should be of a nature rather to *strengthen* by *exercise*, than to *weaken* by *omission* or disuse, the spirit and habit of *industry*. A *dairy* of cows *would* do this. Attendance upon a *single* cow is a species of industry, if industry it can be called, which is, of anything that can bear that name, the nearest of kin to idleness.

4. In the *general* account of the national wellbeing nothing is gained, but a good deal lost, if *Paul* be *stript* of as much as is *bestowed* on *Peter*. Setting aside the accidental faculty of profiting by the too-little-known opportunities afforded by husbandry in its highest and freshest state of improvement—to the maintenance of a cow the possession of *land* will be indispensable. This land must either be land in separate *ownership*, or land in the state of *waste*, and *common land*. Of land in *separate ownership* about three acres is looked upon as necessary to the constant maintenance of a cow. Those three acres, how are they to be had? are they to be *bought* and *given* along with the cow? This clause does not go so far as to say. Are they to be *hired*, and the *rent paid* for them?—not to mention cow-house and dairy, for which articles shifts (it may be said) will be made. Nor for *this* neither does the clause go so far as to make provision. The cow, then, is to be turned upon the *common*; but no sooner is the cow upon the *common* than the expiration of the annuity of at least by far the greatest part of it, five, six, or seven-eighths, is certain and near at hand. In the existing state of population on the one hand, and husbandry on the other, it is a point pretty well ascertained,—a common *will* afford *airing ground* to a milch cow, but it will *not* afford *maintenance*. It *will* keep the *animal* alive; but it will *not* keep alive in her the capacity of yielding milk in a quantity amounting to a resource. While the *annuity* is thus sinking, so is the value of the *capital* itself. After a year's existence upon a common, a well-fed cow turned out in the increasing vigour of her youth will instead of *gaining* have *lost* in value.

But before the cow was turned upon the common the common was *already* overcharged. The common which is *not* already in this state it will I believe be difficult to find. The *accession* of this new mouth will not *add* to the quantity of the *pasture*. So much, therefore, as the owner of *this cow gets*, so much do the owners of *other* cows *lose*.

Capital, therefore, cannot be given in this shape without being paid for at least *twice over*,

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(even laying out of the question the certain and enormous depreciation in value:) once by the amount of the purchase-money, again by the amount of the *annuity* or *rent charge* thrown by the depreciation of the amount of the pasture upon the *other* commons: a depreciation *equal* at least to the utmost gain accruing to the *commons* thus *favoured*. If £10 then be the money *paid*, and £10 be the value of the cow to the individual on whom she is bestowed, £20 at least would be the loss to the *community*, the receiver of the bounty deducted:—£10, the *clear* loss to the *whole* community, the receiver of the bounty included.

By donations in any shape you may take a few favoured individuals out of the class of poor, and place them in the class of people of easy circumstances. But this, which is only the system of monastic charity upon a great scale, giving the beef whole instead of dealing it out in broth, is limited in its extent as well as pernicious in its effects, and in relieving present indigence sows the seed of future.

The system to be sought for is a system which shall make the supply of means keep pace with that of wants, and that by a pre-established chain of causes and effects, whatever be the rapidity or anomality of the progression. This problem has been the object of a good deal of reflection, embracing the subject in all its relations and dependencies, and the solution of it is supposed to be effected.

Consistency may be another point to be considered. While the Bill with this clause in it for the *surcharging* of common lands is depending, another Bill is depending, or at least in contemplation, the professed and sole object of which is the *diminution* of the *quantity* of the land thus circumstanced. The principle in the one case is, that the existence of land in this state is *advantageous* to the community; in the other case, that it is *dis*advantageous. An option between these two conflicting measures seems very requisite to be made.

The tendency of the *General Enclosure Bill* seems alike favourable to the interests of the *rich* and *poor*. It does, perhaps, without much seeking, all that *can* be done, of what appears to be *sought* to be done by the *present Bill*. Its most direct and prominent object is the giving facility to the *wealthy* towards the augmentation of their wealth. But at the same instant it effects with equal certainty an object of still higher amount, the raising of the wages of labour in favour of a class among the poor, and that the only one in which the wages of labour have been shown to be in many cases unavoidably inadequate to the purpose of maintenance.

I confine myself to the cow, because the cow alone occupies the foreground; there are indeed other animals in the offscape, but the species are indiscernible, and I have already plunged but too deep into the details of husbandry.

I should incline to the *sow* as absorbing less capital, as giving more exercise to industry, and affording a resource less precarious in its nature. But there are those that will tell me that in the government of the *dairy* swine are dependent upon cows; nor will the expensive beneficence of the author of this clause content itself with so inferior a resource. Looking beyond the sow I see everything or nothing. A rattle-snake is "*yielding profit*" to the hand that shows it, and no *common* is surcharged by it.

The resource presented by a *loom* is a *permanent* one: it *may* be *rendered* an *unfluctuating* one. A loom eats nothing; is not apt to be sick; does not sink in value by under-feeding; has no legs to be driven away upon; and is not exposed to sudden death. The working of one loom need not hinder the working of another.

A loom is but one example of a machine. But protesting against the donation of capital in any shape, protesting against the *principle*, I will not dive further into the mode.*

CHAPTER V.

4. *Relief-Extension, or Opulence-Relief Clause.*

"LXVIII. And be it further enacted, That no person shall be excluded from parochial relief, or the benefit of this Act in any particular before-mentioned, on account of any real estate hereinafter-mentioned, or on account of any visible property not exceeding the value of £ in the whole, and of the description hereinafter mentioned, that is to say, if such property shall consist of a tenement or cottage with the appurtenances, whether such person shall hold the same or any part thereof in his or her own right, or in the right of his wife, and whether severally or as joint tenant, or as tenant in common, or shall occupy any tenement or cottage with the appurtenances, belonging to his or her lawful child or children, or the issue of such child or children being respectively part of his or her family, and whether as guardians or otherwise, of whatever value the said tenement or cottage with the appurtenances may be, and also if such property shall consist of tools or implements of trade, or household furniture, wearing apparel, or other necessaries suitable to the condition of such poor person, not exceeding in value in the whole the sum of £ , but that every person in the situation and condition before-mentioned, and not able from other circumstances to maintain himself or herself, or his or her family, shall be

* Some five-and-twenty years ago, I remember seeing in Elmsley's window, fresh imported from Germany, a book with this title, "Means of *Enriching States*," by an Aulic Counsellor to one of the Margraves. It was seized with an avidity proportioned to the importance of the discovery. *The secret had been tried, and had succeeded.* It consisted in stocking your farms *well* with cows. But the difficulty was to *get* the cows.

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entitled to the benefit of this Act as fully and effectually as if such person was not possessed of such property as aforesaid."

We come now to the *relief-extension* clause, or *opulence-relief* clause. In reading the above system of donations, a natural, and I am apt to think, a scarcely avoidable supposition is, that it is for the *indigent*, and the indigent *only*, that they could have been intended; whether they are *really* confined to the indigent, whether the field open to them be not so ample as to comprise what in the instance of people of the *working* class may be styled *opulence* is a question on which it will rest with the reader to decide.

The proviso is "*that no person shall be excluded from parochial relief or any of the benefits of this Act, on account of the possession of any tenement or cottage with its appurtenances, whatever may be his or her estate or interest therein, or on account of any other visible property not exceeding in the whole the value of £30, which shall consist either of tools or implements of trade or household furniture, wearing apparel, or other necessaries suitable to the condition of such poor persons.*"

Under these words, what seems tolerably clear is that a man may be worth £30 of "*visible* property," (to say nothing of concealed or non-apparent property,) and still come with as irrecusable claim to the above list of pensions and donations as if he had not property to the value of a single farthing. What to myself (I must confess) *is not* by any means clear, is to what higher pitch the opulence may rise without striking the proprietor's name out of the book of indigence.

Let us consider it, in the first place, as *not* exceeding £30. A document naturally enough to be wished for by one who would wish to form a just estimate of the effect of this clause, is a comparative statement, setting forth on one hand the number actual or probable of individuals whose property *rises* to the *height* of this *minimum*, on the other hand the number of those whose property *falls short* of it. Should the indigent list, as thus defined, be found, as I cannot help vehemently suspecting it would be found, to include a vast majority of the good people of England, five, six, or seven millions for example, the system of *home provision*, as thus explained, would be found (I much fear) to amount to a plan for *throwing the parish upon the parish*.

The nature of the process by which the mass of national wealth is *accumulated* was (I doubt) not sufficiently considered in the formation of this Bill. To judge by this clause in particular, it looks as if certain hypotheses somewhat of kin to the following had been assumed—that wealth is the gift of nature, not the fruit of industry; that every human creature, male as well as female, comes into the world with £30 in its pocket; and that this sum is what it belongs to the government to guarantee to every man the undiminished possession of against misfortune and imprudence, as it guarantees to him the possession of his two arms and his two legs against the attacks of injury.

The apprehension of doing undesigned injustice to the intentions of the Bill is an apprehension that pursues me through the whole tenor of it, but really I know of no means of coming at the *intention* of an instrument, unless it be through the *words*. Judging of it, then, from the words, £30 is the mass of property which *every* person *without exception* may it is supposed possess, and yet be in a state of indigence: in a state so low, so much below the natural state of man, as ought not to be suffered to continue. This *minimum*, the guarantee we see thus made of it, is not confined to *families collectively taken;* it is not confined to heads of families; it extends to every human being whatsoever, having a family or none, living *under the head* of a family, or living by *himself*. A head of a family may have his own £30,—£300 may be the amount of the family estate, and all the while the family hanging on the parish.

If consistency be an object in legislation, it may be worth while to compare this intended *pauper relief* with the Pauper Law Relief Act of Geo. I., which exempts, or seeks to exempt persons, whose circumstances fall below a certain pitch of supposed indigence, from the sort of general outlawry in which that proportion of the people stands involved; against which the weight of the expense, howsoever heaped together, has shut the doors of justice. Five pounds is the sum assigned in *that* case, £30 (not to say £300) is the sum assigned in the present case; according to this proportion it will be matter of some curiosity to observe how much easier a man will find it to get *other* people's money than his *own*, and how many there will be in possession of the *former* faculty, while they stand excluded from the *latter*.

That it is by no means clear that under this clause the specified sum of £30 is the highest which a man might retain of his *own* while he was maintained at the charge of *others*, has been already hinted; and the more closely the clause is scrutinized into, the greater the difficulty of ascertaining the real limit will appear.

My doubt is, in the first place, whether in the computation of the visible property the moveable is, or is not, to be added to the immoveable; whether the words "*in the whole*," are meant to be confined to the "*other visible property*," or to be extended to the *tenement* or "*cottage*." That they were not meant to extend to the tenement or cottage, and that therefore a man may, without standing excluded from any of these bounties, be possessed of £30 worth of visible *moveable* property in addition to the fee-simple of a cottage, may be thus argued.

From the word "appurtenances," it may be

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inferred that the cottage may have more or less land annexed to it, especially when it is considered that under the *cow-money clause*, it is intended a man shall keep a cow. But even without land, 40s. or even 50s. a-year is but an ordinary rent, but an ordinary annual value, for a cottage; and as in the instance of immoveable property, small concerns (coming within the reach of a greater proportion of purchasers) are apt to sell for more years' purchase than *large* ones, twenty years' purchase upon 40s. a-year, that is £40, may be taken for rather a low estimate. Allow but the £30 for the value of the dwelling, this will not leave a farthing for the furniture, tools, clothes, and other necessaries. It does not seem to accord with the views manifested in this Bill, that the property of the cottage a man lives in, altogether unaccompanied with any other necessary, should debar altogether from a share in the bounty so liberally bestowed, when the annual value of the house is no more than the ordinary rent of the abodes of the *worst paid* class of labourers.

But if the value of the cottage is *not* to be *included* in the £30, it is then to be *added* to the £30; £40 worth of immoveable property upon a low estimate may thus be added to £30 of immoveable property, and the possessor not excluded by this £70 from the right of obtaining cows, supplemental wages, and pensions, on the plea of indigence.

The pursuit of the strict rules of grammar might raise up other difficulties in abundance, on the ground of this *single* clause: but this specimen may suffice.

The more conspicuous the spirit of humanity that shines through every clause, the more sincerely one regrets to see it in such straits. What seems to have led the author of the Bill into the difficulty in the present instance, is the often painted, and always melancholy, picture of an industrious family, reduced by blameless misfortune from a state of comfort and independence to a state, perhaps, of *confinement*, at any rate of wretched dependence, from which a small relief, if administered in time, might have rescued them; dependence on scanty and, in point of quantity, precarious charity, confinement to the idleness, and discomfort, and ignominy of an ordinary poor-house,—*Come in and give up your all, or stay out and starve;* such is the harsh though unavoidable alternative presented by poor-house charity in the existing state of things; an alternative the more excruciating when the *all* thus to be given up for a mess of pottage is (as it sometimes will be found to be) the sad remnant of fallen opulence, sufficient at one time to place its possessor above the necessity of manual labour.

This is one of the many cases in which compassion is as laudable, as in a feeling heart, it is unavoidable. But compassion is one thing; relief, efficacious and unmischievous relief, a very different thing: the one may be *always* bestowed and in any quantity; the other should never be attempted to be bestowed, especially at the *expense* of the community, and upon a scale extending over the *whole* community, till after the strictest and most comprehensive inquiry whether the undertaking lies within the sphere of practicability, and whether the removal of the evil, if possible, be not inseparably connected with the introduction of still heavier and more extensive, though less permanent and immediate, evils. We commiserate *Darius*, we commiserate *Lear*, but it is not in the power of *parishes* to give kingdoms. To banish not only *indigence* but *dependence*, it would be necessary to banish not only *misfortune* but *improvidence*. To guarantee to every man a *subsistence* is *practicable* and *practised;* to guarantee to every man the perpetuity of his station in the scale of opulence would be altogether impracticable, the very *attempt mischievous* and *perseverence ruinous*.

What seems not to have been sufficiently considered is, that betwixt the *absolute refusal of relief* and the exaction of the *absolute surrender of permanent* property, in return for *transient relief*, there is a *medium*, which is the granting the relief to the extent of the property on the footing of a loan. This middle course, the only feasible one, the only unpernicious one, is practicable, for it is *practised*. A mode of practising it, and practising it without expense, forms one leading feature of the *large-establishment* system in the shape and magnitude herein-above supposed.

Meantime, although it were regarded as an established point that cottages, any more than kingdoms, cannot by the hand of *public* charity be secured against decline, let us not conclude that the misfortune is altogether beyond the relief of remedy. It is in this quarter of the region of distress that we may behold a part of the extensive field in which *private* charity, as well as domestic friendship, may exercise and feast itself without prejudice either to *industry* or *justice;* nor let it remain unheeded that so long as there is *propriety* or even established CHARACTER, with but a tolerable prospect of *repayment*, if no assisting hand can be obtained either from domestic connexion, from neighbourly intimacy, from special patronage, or from wide-spreading though private charity, the presumption, though not absolutely conclusive, is at any rate not weak, not only that extraordinary merit, but that ordinary good conduct, has been wanting; and that the pangs of falling prosperty are but the just and *useful* punishment of improbity or improvidence.

Thus stands the account of the mischief, the apprehension of which has been excited by the view of the destined amendments to the existing system of *out-allowances*. What possible good can arise out of those amendments in any instance, I must confess myself unable

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to conceive. Under the existing system indigence does actually receive *such*, and, taken in the lump, at least as *much* relief as is *necessary*. The plan of *distribution* remaining untouched, what was the task that could remain for these amendments? Either to do *nothing*, or to administer relief where it is not necessary.

Against the system of *out-allowances* (setting aside these objections on the score of economy and industry, which have been urged by way of objection to the system itself) the great and general complaint, as far as I have had occasion to observe, is, not that it is *insufficient*, but that it *should* be *necessary*; that is, that many industrious hands should be continually *thrown upon* the *parish*, (as the phrase is,) who ought (as certainly they ought, *if possible*) to be enabled to maintain themselves without being subjected to any such degrading obligation. But the *keeping* them *from* thus falling upon the parish is what the Bill neither *does*, nor so much as *professes* to do. So far from it, as far as it does anything, it *throws* them there, it throws them in greater *numbers*; it throws them with greater weight. The *grievance* is that the industrious *poor* should be so liable to be *indigent*, that the *independent* hand should be so liable to fall into *dependence*. Whether the cure be possible is another question; but be that as it may the Bill does not attempt it.

What I had all along been considering as a point understood to have been established, was the inferiority of the wages of *husbandry* as compared with those of other labour. What I had in consequence understood to have been the object of the Bill, as far as *out-allowances* are concerned, was to confine the bounty to the class which presents the title to it. But unless the benefit of the *cow-money* clause be thus confined, (which it can only be by *forced implication*, for there are no words of *limitation*, to perform the office,) I can see no branch of the bounty to which *working hands* in *general* have not a claim as irrecusable as any that can be made by this *particular*, though not very *ample* class: *all* are equally *invited*, none *excepted*; manufacturers, handicraftsmen, even domestic servants, and others, the high paid and pampered inhabitants of *large towns*.

If *necessity* (it may be said) *be equal, no matter what the class*. True, but in any other class necessity is *not* equal; at the same time that in *every* class, "*the full rate or wages*," (whatever be the *class* and whatever be the *rate*,) the full rate or *wages*, be the work worth *anything* or *nothing*, is guaranteed by the Bill to every hand without exception, which with ever so little good-will or fruit will set itself to work. The bounties it provides are bestowed (for anything that appears) not only upon the *worst paid* classes, but upon *every better paid* class, up to the *best* paid. And upon these the *quantum* of the bounty it bestows is not a quantity limited by that which is *necessary*, but a *superfluous* quantity rising up to the height of the highest pitch of superfluity which the earnings of the *best paid* class are capable of furnishing. It relieves them not according to the measure of their necessities, nor according to the quantity of relief they really want, but according to the "*full rate or wages usually given*,"—*given* one knows not to *whom*, unless to *them*; in a word, according to the means they have had in their hands of placing *themselves* above the necessity and above the bounty.

CHAPTER VI.

5. *Apprenticeship Clause.*

"XL. And be it further enacted, That all poor children, who shall at any time have received employment under or by virtue of this Act, and shall obtain a certificate of his or her good behaviour during the time of such employment from the person or persons appointed to the management of the poor of any parish or united parishes, with the consent of two of the visiters of the district in rotation, and confirmed by the guardian of the poor for the county or division, shall be entitled to be put out as apprentices or hired servants by the person or persons appointed to the management of the said poor, with such rewards as hereinafter mentioned, by writing under their hands, according to the Form No. and No. in the Schedule hereunto annexed, or to that or the like effect; and that every male child of the age of fourteen years, and every female child of the age of twelve years, or at an earlier age if it shall be thought fit, may be bound apprentice to any reputable person in Great Britain, to be taught any art, trade, mystery, or occupation, or any handicraft business or manufacture, which they are respectively fit for, for any term not exceeding seven years, and so that the term of such apprenticeship shall not endure beyond the age of twenty-one years for male children, and of nineteen years for female children, and in any employment of husbandry for such time not less than three years for such child or children respectively, and as the major part of the persons hereby authorised to bind such apprentices shall think most suited to the circumstances of such respective child or children, or until such child or children respectively shall attain the ages, if a male, of twenty-one years, or, being a female, of nineteen years; or such persons respectively may, if they shall think the strength or capacity of any male child or children suited thereto, cause him or them to be employed and bound as apprentices in the sea service for the time and in manner aforesaid, and according to the laws in force for binding poor apprentices to the sea service; and that every writing made in pursuance of this Act shall be as binding as an indenture between the master, mistress, and apprentice, and the guardian of the poor for

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the county or division confirming the same, and his successors; and shall in all respects have the same effect, and operate as an indenture for apprenticing poor children, whose parents are not able to provide for them, made and executed in conformity to any of the laws now in force relating thereto, and shall be enforced in like manner by the guardian of the poor for the county or division for the time being, according to the directions of this Act herein given, with relation to any property belonging to any parish in such county or division. And all and every child or children, of the respective ages before-mentioned, or at an earlier age if it shall be thought fit, may be hired to any reputable householder or husbandman in Great Britain by such persons as aforesaid, with such allowance of the visiters as before is mentioned, to be domestic or menial servants in husbandry, housewifery, or otherwise, for any term not less than one year, or until such child or children shall respectively attain their ages, if male, of twenty-one years, or, if a female, of nineteen years, or until marriage, at such competent rate of wages as shall be in that behalf agreed upon; and at the end or other expiration of such hiring, may be taken into employment in the said school or schools of industry, or otherwise, under the authority of this Act, or may be again hired for such term as aforesaid, and so from time to time, until they shall respectively arrive at such ages as aforesaid. And that, upon every such binding or hiring as aforesaid, the persons joining in such contracts, on the behalf of such poor apprentices or servants, shall take care that they shall be sufficiently clothed and maintained according to their respective wants and conditions, and that the wages (if any) to be paid to them shall be paid to or laid out for the use and benefit of such child or children: and the said person having authority to join in making such contracts may, with such consent as aforesaid, pay out of the funds provided for the relief of the poor by virtue of this Act, or any the laws now in force, such reasonable fee or consideration for the binding out of such poor apprentices as they shall deem necessary; and may also provide such poor child or children, so bound out as apprentices or hired as servants, with such suitable clothing as shall be necessary, at the expense of the parish or united parishes, and as a reward for the good behaviour of such child or children during their said employment in such school or schools of industry, or other places aforesaid, in which they shall have been employed before the commencement of such apprenticeship or hiring as aforesaid; and that such fee or consideration so paid or contracted for, or such suitable clothing so provided, shall not be charged or chargeable with any stamp duty whatever."

By this clause every child of a certain description is declared to be *entitled* to be put out as an apprentice or hired servant, with certain advantages not specified.

This clause being but a *frame*, and the picture not hung up (but why not hung up?) a criticism on the picture may appear chargeable with precipitation.

Reasoning under this disadvantage, what occurs to me on the subject is as follows:—In the matter of apprenticeship, three points may be distinguished; the legal subjection during the continuance of the relation thus contracted—the exclusive privileges attached to that relation by a particular law in a numerous class of instances—and the comparative rank in life it confers in a still more extensive class of instances as compared with the condition of an unprivileged hand occupied in ordinary labour.

1. Of the utility of the legal subordination my conception is the same with that which stands apparent on the face of the bill. Conceiving of it as calculated to operate in a certain degree as a *source of instruction*, and in a yet higher degree in the still more important function of a *security for good behaviour*, every accession to the number of the instances of its existence presents itself to me in the shape of a public benefit.

2. As an instance of the monopoly in trade, I know of but one opinion relative to it—oppression, in the instance of the individuals excluded from the occupation thus engrossed—excessive earnings, in the instance of the partakers of the privilege; whence the alternation of penury with excessive plenty in a rank of life where sensual excesses supply the demand for occupation in a vacant mind:—enhancement of prices in every article connected with the subject-matter of the monopoly:—such appear to be the consequences to the several parties interested—to individuals excluded, individuals favoured, and the community at large.

3. As a source of exaltation, so long as the superiority it confers is confined to that which is the natural result of the improvement and augmentation of natural powers, the situation presents nothing but what appears to be the unavoidable consequence of any such improvement—a consequence beneficial, perhaps, in some points of view, pernicious in none: but so far from being either necessary or useful, it seems pernicious, to wit, on the accounts just mentioned, if in any respect it be the result of coercive law. But this property is what may be attributed to it in either of two cases; if a man be excluded from the situation by a direct prohibition to engage in it, or if public money be employed to pay a man for helping a boy to get into it; in the one case the coercion takes the shape of restraint, in the other case of compulsion; in the one case the monopoly is a direct one, in the other case an indirect one, produced by an addition made to the general mass of taxes.

Considered as confined to the lowest, that is, the lowest paid class of working hands, I

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see an uncertain chance of improvement, in point of morality, to be bought at a certain expense. I am not disposed to underrate morality, but in the present instance I am not able to obtain what to me appears a requisite assurance that the chance purchased will be worth the price. In the instance of each apprentice thus taken in consideration of so much public money, I want sufficient means of assuring myself in relation to both of two points; that an apprentice would not have been taken without the money, and that the portion of morality paid for by the money will be worth it. In the first case, the business seems exposed to the following dilemma: if the fee be small, it will not be sufficient to turn the scale; it will produce no more apprenticeships than would have been produced without it: if it be large, it opens a proportionably wide door to profusion and abuse. In the second case, the fee, large or small, holds out to improper hands a temptation, which without it does not exist. He who takes the apprentice without money can propose to himself no other advantage than what is to be derived from the service; and thence the instruction, employment, and morality of the apprentice. He who takes the apprentice with and for money, may have employment for the money without having any for the apprentice.

All this while, let it not be forgotten, there are existing laws under which the taking of apprentices, in the employment in question, without money, is compellable, and which are more or less enforced. Hence a source of complaint and jealousy and injustice, real or imagined, while one man in a parish is compelled to do for nothing that which another man is paid for.

Under these doubts, though really they are but doubts, with regard to the value of the purchase, the *vis inertiæ* would, I think, if it depended on me, be sufficient to keep the money in my pocket, especially while there are so many purchases to be made with it, the value of which is beyond doubt; among which the purchase of so much security in respect of property, as is constituted by the leaving the money in the pockets of the contributors, ought not to be forgotten.

To judge of the clear benefit resulting from this or that application of a sum of money, compare the gross benefit with the mischief of the most mischievous tax—for instance, the taxes operating in prohibition of justice. This test I consider as a principle in finance, and it is, for aught I know, a new one:—of the expenditure that will abide it, the utility ought, it should seem, to stand pretty clear of doubt.

If the occupations into which it is proposed to force hands by public money be of the high paid class, the question of the expediency of the provision presents itself under a different shape. If the individual thus forced into apprenticeship in this class by dint of the fee be one more than would have existed in the class without the fee, this addition, as far as its influence extends, goes to the reduction of the monopoly, and tends accordingly, though in a microscopic degree, to the diminution of the mischiefs of it. If, on the contrary, he makes no addition to the number of the sharers in the monopoly, but only occupies the place of some other individual, who, but for the fee would have occupied it, then no effect is produced, but the throwing away of so much money.

Reasons for apprehending that the addition upon the whole may be rather apparent than real, are not wanting. This expedient for forcing hands into the class of employment in question has no tendency to increase the quantity of employment in the species of employments belonging to that class: its real tendency is of the opposite kind, to send hands to the employment, not employment to the hands. But viewing the whole mass of employment, of the species in question, in the lump, while the demand for the work—for the produce of the employment—is not increased, no fresh hand can be forced into the employment in question without forcibly keeping some other out of it. The individual who would thus have been kept out, in any instance, by force of the bounty—the individual who but for this bounty would have been received into this extra paid and superior class—is more likely to be one belonging to that same class than one belonging to the inferior class. For no reason can be assigned why the superior class should not in the way of natural increase be as capable of keeping up its numbers as the inferior class; and the offspring of the superior class has better opportunity of an introduction into his own superior class than is likely to fall to the share of a member of the inferior class.

If this then be the case, it seems to follow that as often as the child of the labourer or impoverished tradesman thus gets a lift, the consequence is, that some other child of a tradesman, by finding the condition of the tradesman shut against him, must receive a fall.

Let me not be understood as pleading in favour of any forced system of casts; all I contend for is a system of equal and unexpensive liberty. Where no partitions are set up or kept up by the hand of law, good fortune and merit on the one hand, ill fortune and improvidence on the other, will keep up every degree of mixture which the interests of hope and industry can require.

The conclusion seems to be, that in this instance, as in the other, no advantage is near so certain as the expense.

If the bargain,—natural advantages and bounty taken together—be worth making, candidates for a share in it are not likely on either part—on the part of master or apprentice—to be wanting. The individuals it has open to are "every child who shall *at any time* have received employment by virtue of the Act, and shall obtain a certificate of his or her

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good behaviour during the time of such employment, according to the form, No. ( ) in the schedule annexed." If then £5, for example, be the apprentice fee, £5 may be the price of a day's service. While a patron exists in whose judgment a douceur of this kind, whatever may be the amount of it, may be worth the acceptance of an obsequious client, howsoever it be with other manufactures, the manufacture of apprentices need not stagnate. Whether an article of this sort be worth throwing into any such fund as the election fund, is a question that must wait its answer till the picture above spoken of has been inserted into its as yet vacant frame.

The facility thus provided might have been regarded and intended in either of two lights: in the light of a distinction or reward, or in the light of a general benefit. In either case it may have been regarded as an instrument of morality, though exercising its operation at a different period in the two cases: in the one case, at the period previous to the apprentice-contract, acting upon the individuals concerned in the quality of candidates for the advantage; in the other case, at the period subsequent to the formation of the contract, acting upon them in the quality of persons subject to the powers conferred by the contract.

In which of these two lights it was considered is what I do not clearly see: the question is not altogether immaterial: for the purposes do not exactly harmonize, at least in the quantity of expense they call, for there is a considerable difference; in the one way the magnitude of the benefit is in the direct ratio, in the other in the inverse ratio of the numbers on whom it is conferred. The facility of admission being so great, the attainment of the advantage being so easy, it follows that unless the facility were the result of inadvertence, the direct general benefit rather than the indirect one resulting from the operation of the distinction in the character of a reward, was the object principally in view; for the certificate of general good behaviour being a matter of course, unless where some very flagrant and special instance of ill-behaviour can be proved, can scarcely be considered as drawing any other than an accidental line.

The difference between the quantity of money that may be requisite in the two cases is such as may render this point, minute as it may seem, worth settling. Call the average number of parishes in an union five; this for the 10,000 parishes in England (Wales included) makes 2000 unions. Annual average number of boys and girls capable of being put out apprentices in each union, suppose ten, 20,000 in the whole. Annual total amount of apprentice-fees at £5, £100,000; at £10, £200,000.

Suppose distinction and reward to be the object rather than immediate and universal benefit, then instead of the five, one apprenticeship for each five in the course of the year will (let us say) suffice: in this way the expense would be reduced from the £100,000, or the £200,000 to £20,000 or £40,000.

The refusal of the certificate will be a stigma: fewer or more, what is to become of the individuals thus stigmatized? Who will give them employment? Who will have anything to do with them that can help it? They who have been thus pronounced unfit either for apprenticeship or service? Those for whose good behaviour security is most wanted, these are they in whose instances the security is refused. Once more, what should we say to that *pharmacopœia* which, for those who are in good health, should provide *aurum potabile*, and other expensive drugs; but for those who are sick, nothing? whether *found* sick, or *made* sick by it as here.

The considerations thus brought under review will be apt to appear minute and somewhat vague; but that the utility of a provision should turn upon considerations to which those epithets are applicable, and that too a provision by which public money is scattered without being weighed or counted,—is not that a circumstance sufficient of itself to present the provision in a questionable shape?

Is the supposition above made of the ten apprenticeable youths per union to be regarded as a reasonable one? This is but one out of a multitude of arithmetical questions all equally pertinent, which may have presented themselves in crowds under this as well as every other of the clauses touched upon. For all such questions, I must confess myself to have but one answer—utter ignorance. The blame, however, if I may venture to say as much, lies not with this humble comment, but with the text, which, while heaping up so immense a mass of bounty, knows nothing of the numbers of those by the number of which that bounty is to be multiplied, nor consequently of the expense.

General Remarks on Home Provision.

The grant of this indulgence is limited, it is true, to the case of a man's being "a person entitled to the benefit of this Act," but how this point is to be ascertained is a matter which I am much inclined to believe will be found beyond the comprehension of those who are to judge—it most certainly is beyond mine—and, in the meantime, the family must not be left to starve.

But for all those bounties a fund, it may be said, is provided, and that an ample one, the fund arising from the whole stock of as yet unemployed ability, now for the first time to be turned to use.

To this I feel myself compelled to make two answers: one is, that I doubt the real produce of this stock when put in motion will turn out to be little or nothing, to say no worse; another is, that, be it ultimately what it may, it cannot for a long time be in readiness to honour the drafts thus largely made upon it.

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On the first of these points I shall have occasion to touch separately; the other is more particularly to the purpose here.

The impediments to the union of profit with relief-employment, and thence all profit to be drawn from employment on the one hand, and relief and the distribution of the bounties on the other, are these:—

1st. That the distribution of the bounties is to commence at the very commencement of the Act, viz. on the 10th of July in the present year. But, by section 10, it is not till after the 29th September following that the first link in the long and complicated chain of causes and effects, on which the commencement of the means of employment is to depend, can be begun upon; a work which, where it finds willingness on the part of the great variety of persons whose co-operation is necessary, can scarcely do otherwise than take up years; and which in those districts in which there is any want of such necessary co-operation will, so long as such want continues, not be begun upon at all.

Meantime the distribution of the bounties is running on full swing, for immediately "*from and after the commencement of the Act*" as aforesaid, it begins as soon as "any father" is "entitled to the benefit thereof according to the provisions hereinafter-mentioned."

For the purpose of entitling a man to the benefit of the Act there is nothing anywhere specified, from the beginning to the end of the Act, unless it be the qualification of wanting relief, the qualification spoken of in the 16th section; nor yet to disentitle a man, but the act of refusing employment or instruction, the disqualification specified in section 21. On such refusal a man is made to stand precluded not only from the "benefit of the Act;" in short, not at all from the benefit of the Act by name, but from relief itself, from every species and degree of relief whatever.

But till a man has made the refusal in question the disqualification does not take place, and till tender shall have been made refusal cannot have taken place. But tender of employment cannot be made till the means of employment exist; that is, till the establishment for affording employment has been set upon its legs. The only assignable disqualification then cannot take place in any district till nobody can say when, while the only assignable qualification, the wanting relief, exists in itself already, and exists in the shape of a qualification under the Act, as soon as the Act itself comes into existence—that is, on the 10th of July next.

Another circumstance that stands in the way of the coincidence between disbursement and supply is the impracticability of performing the condition on which the bounties are made to depend, viz. the acceptance of the instruction and employment, an impracticability that will be found to take place in many cases. That the children are not to be lodged in the schools in which they are to work seems pretty clear; that the adults are to be lodged in any such common dwelling does not appear. The districts, though not upon anything like what I have termed the large-establishment scale, will, so it seems, consist of a considerable number of parishes laid together. The greater the number of parishes that may come to be laid together, the greater the distance between the school wheresoever situated, and the houses of the greatest part of the number of the scholars, who are to be of all ages from five years upwards. Here then comes a sort of dilemma.

If the district is small, the expenses necessitated by those parts of the establishment, of which the expense is incapable of diminution, will be so great as to cut out every possible profit that could be made out of the earnings of so small a number of working hands. If the district is large, whether from the proportion of the time consumed on the journey to and fro, or from inability to perform it, or inability on the part of the parents or managers to enforce the performance of it, the labour of a great part of the intended scholars will be out of the reach of being collected.

The exclusion thus put by distance in the instance of infancy is co-extensive, it is evident, with the inability, whatever be the source.

But wherever the performance of the condition meant to be annexed to the receipt of the bounty is or is deemed impracticable, and that without any supposed fault on the part of the intended object of the bounty, the condition sinks of course, and the bounty stands alone.

After what has been said on topics of so much more weight, a hint of this topic will probably be deemed sufficient; to follow it up and apply it in the way of calculation would be matter of some difficulty, and occupy more space than can be allotted to it here.

A third reason is, that from the mode of payment a large proportion of the hands must be fully paid, while their work is worth nothing, so far from being worth enough to pay for its own charges. The mode of payment prescribed, and prescribed without limitation or exception, is payment by the piece. I do not say that this is not the best mode of payment in many instances, perhaps in by far the greatest number of instances; but in some instances it is impracticable, because the degree of advance made in quantity of work done is unsusceptible of mensuration; in other instances it is apt to be disadvantageous, on account of the difficulty of ascertaining the goodness and quality of what is done, and in proportion to the difficulty of ascertaining quality will be the certainty of bad work; and work may in many instances be so bad, as not only to afford no profit but to destroy the value of the materials. But in all instances there will be a certain period, the period of instruction, during which, with all imaginable diligence and honesty on the part of the workmen, the work will be worth nothing. But while the work is ac-

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quiring its value the workman must live, and will be made to live. Accordingly, by section 19, if "the sum allotted for the support and maintenance" of the family, whether under the name of wages, earnings, or allowances, proves deficient, the deficiency is to be made up. Payment by time, instead of the piece, will then take place in the first instance through necessity, and, having taken root, the interest which idleness will give a man in its continuance will render it not very easy to eradicate. I do not dispute but that it may in most instances be eradicated under a proper system of regulations and inducements adapted to the nature of the case; all I mean is, that I see no great probability of the growth of any such good economy, under the auspices or rather the rod of a system of legislation, which after enacting that, practicable or not practicable, the working hands, that they may do so much the more work, shall be paid according to what they do, enacts, in the same breath, that they shall go on for an indefinite time, receiving whatsoever may be thought proper to allow them under the name of maintenance, although what they do shall continue to be worth nothing; and this without so much as the inconvenience of quitting their own homes.

Had the application been left to individual discretion, a hint, coming from so high a quarter, might as a hint have been of no small use; but the precept being thus peremptory and unbending, its tendency would rather be to bring the principle into discredit than to promote the use of it.

Essay on the question,—Who are the persons for whom the several bounties provided by this Bill are intended?

When a system of bounties so various in its appearance, so vast in its magnitude, and in its apparent burthensomeness to the public so formidable, is provided, a natural question is, Who are the persons destined to partake of it? The answer I must confess myself unable to give: had I been able, it is the answer I should have given, not this essay, or, rather, as the question would have been needless, the question would not have been started.

"The benefit of the Act:"—the word *benefit*, as employed with reference either to the Act in general, or to some part of its contents, occurs either in the singular or the plural number in nine sections: in five of them (1, 2, 3, 19, 20) in the singular; on which five occasions such of the effects of the Act as are considered as being of a beneficial nature are considered as comprising one entire undistributed, undiversified mass of benefit: in two others in the plural (sections 4, 17); and in the two remaining ones the benefits spoken of are spoken of as resulting from particular provisions therein mentioned, and not as resulting from the entire body of the Act. In neither of these two sections, therefore, is to be found the benefit of the Act. The first time the phrase occurs, which is at the very opening of the Act, a sort of promise is made to give the elucidation here sought: "*Any father entitled to the benefit thereof*," viz. of this Act, "*according to the provisions hereinafter mentioned.*" The accomplishment of this promise, if it be one, is unfortunately forgotten. Provisions there are enough which speak of this benefit, which allude to it, which, like this provision, speak of it as indicated, but there are none that indicate it.

Had the task been mine, having settled with myself who the persons were whom it was my view to benefit, my first care I must confess would have been either to have found or to have made for them a *name*. This name, and no other, is the name I should have called them by as often as occasion recurred for speaking of them.

Having fixed a name for them, little should I think of discarding that name for any circumlocution, much less a circumlocution so enigmatical as that contained in the words, "the persons entitled to the benefit of this Act:" a designation of this sort may be pleasant in a riddle; but, whether pleasant or no, is certainly not profitable in an Act of Parliament.

If it seemed to me a fit occasion for a riddle, I should, at any rate, think it incumbent on me to give the key to it; and, how little soever conformable it be to the usage of riddles, I would give the key along with the riddle in the first instance. I would say, *the persons entitled to the benefit of this Act* are *such and such persons*. But it is evident how much better it would be to say, simply, *such and such persons* at once, leaving the benefit to speak for itself. To state who the persons are who are intended to be *bound* by an Act is matter of necessity—of equal necessity and facility, because when new obligations are meant to be imposed, if nobody is bound by them, nothing is done. But to state and discriminate who the parties intended to be benefited by it are, is, perhaps, never a necessary task, and would seldom be found an altogether easy one. The very existence of benefit in any shape may be problematical; and, supposing it ever so undisputed, the wider it is in its extent, and the more pregnant in its consequences, the more difficult it is to trace. Should the benefits of this Act prove such as the benevolence of the authors of it has been expecting to see, and such as the author of this essay on it would most sincerely wish to see result from it, the more rich the benefit, the more difficult to discriminate. Of this Act it might truly be said as is said by the poet of, I forget what else,—

> Æquè pauperibus prodest, locupletibus æquè,
> Æquè neglectum pueris senibusque nocebit.

So diversified, so extensive, so lasting, so prolific, the benefit, it would be difficult to say

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whether rich or poor, old or young, enjoyed the largest share of it.

But little as it seems necessary in the text of an Act to make mention of its benefits, what seems indispensably necessary is to state, and that in the clearest terms, who the persons are who may be considered as entitled to such of the benefits or supposed benefits of it for which there is anything to be done: in other words, how a man may know whether he is or is not entitled to whatever he may be disposed to claim under the notion of its being a benefit; and, consequently, if anything for that purpose is to be done, what that is which becomes thus requisite to be done.

The necessity of being thus explicit will appear the more indispensable when it is considered out of what description of persons those for whom the most immediate and largest share of the benefit appears to be intended are to come—the class of all others to and for whom information of every kind is most wanting and most necessary. In such mouths a most natural, and surely not altogether an unreasonable, question is, If the writer knew which of us he meant, why did he not tell us, and if he did not, could he expect that we should?

Whatever situation in life be considered, that of the poor or lowly who are to receive the main benefit of the Act, or that of the exalted or magistrates who are to dispense them—of this, as of every other Act, all and singular the benefits depend upon its being understood, and its being understood depends upon its being intelligible.

Whatever is given in such abundance by the Act—head-money for children—supplemental wages, in default of ability and industry—cow-money—is expressly confined to those who are entitled to the benefit of the Act. Who are they? I don't know. Where is it said who the persons are that are to be considered as entitled to this benefit? Nowhere.

In five of the Sections, as we have seen (Sections 1, 2, 3, 19, and 20,) the beneficial result of the Act is spoken of as one undiversified, indivisible, or, at least, undivided mass, and then the persons in question, the persons alluded to, are spoken of as entitled to *it*, viz. to the whole of it, insomuch that nobody who has any part of it can have, or at least is intended to have, less than the whole of it.

In two other Sections (4 and 17) benefits in a countless, or at least uncounted, multitude are spoken of as flowing from the Act; and now a man may have some of them without having others. By Section 4, "no person shall be excluded from parochial relief or any of the benefits of this Act" on any of the accounts there specified.

By Section 17, employment and instruction—employment and instruction, two most desirable benefits, are destined for certain persons. But, to come in for his share of the benefits, it is expressly provided that a man must be "entitled to all the benefits of this Act." Before he can have these two, or either of them, he must take out his title to every other. Before he can obtain the smallest particle either of employment or of instruction, this vacant, this neglected, this uninstructed, this altogether unfurnished mind must possess a degree of instruction—I fear to state it—a degree of instruction, with respect I speak it, such as does not appear to be possessed by even the legislator himself—a degree of instruction (I much fear) beyond the power of any man that lives. He must have comprehended the Act; comprehended it in all its parts, traced it through all its consequences, investigated and catalogued without exception "*all* its benefits;" and this as an operation preliminary to the inquiry whether it be his good fortune to be entitled to any the smallest share in so rich a prize.

Confessing myself not possessed of anything like the degree of instruction exacted with so little mercy of the forlorn objects of the intended bounty, I will endeavour, to the best of my ability, to make out the list of these benefits.

I. Articles which in themselves would appear to be entitled to be comprehended under the list of benefits, though not expressly characterized by that appellation, but rather expressly excluded out of it.

1. Benefit of receiving head-money for supernumerary children.

2. Benefit of receiving supplemental wages at the public charge, in addition to such wages as individuals will give.

3. Benefit of receiving cow-money—money to buy a cow—Section 3. This is, however, expressly mentioned as neither constituting the benefit of the Act, nor so much as any part of it; since the being "entitled to the benefit of the Act" is mentioned as one of two conditions which must concur in order to give a man his chance for receiving this species of bounty. The same observation is equally applicable to both those other clauses.

In one sentence our inquirer might be tempted, for a moment, to fancy himself on the point of possessing the object of his wishes,—but disappointment would be the termination of his hopes. In Section 68, after providing that "no person shall be excluded from parochial relief, or any of the benefits of this Act, on account of the possession of" certain property therein described, it goes on and adds, "but that every person in the situation and condition before-mentioned, and not able, from other circumstances, to maintain him or herself, or his or her family, shall be entitled to all the benefits of this Act." Absolutely? If this be the case, then, the problem is solved. Is it, then, *absolutely?* Alas! no; but *comparatively* only, Section 68, "as fully and effectually as if such person was not possessed of such property as aforesaid." Property, or no property, so the property be not above the mark, a man will be equally entitled to these ben-

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fits: but still the question remains unanswered, *What must I do to be entitled?*

If this concluding reference had not put out the light which for a moment appeared to show itself, the introductory one would have done the business,—would have been sufficient to render the obscurity equally impenetrable. To be entitled to all the benefits of the Act, it is necessary a man should be in the situation and condition above-mentioned: and in travelling over the three preceding sections to see what that situation and condition is, it appears to be the situation and condition of him who is entitled to the benefit of the Act. Who, then, is a person entitled to the benefit of the Act? Who? why a person entitled to the benefit of the Act.

In one place (Section 16) a case is mentioned in which a certain class of persons therein specified may receive certain advantages therein specified; and a sort of person therein also specified "shall," (it is said,) with the consent of two other persons therein specified, (two justices of the peace in the district,) "take order for" the administering to them these benefits. This, though something like light, and the most like it of anything that is to be found in the whole compass of the Bill, is not, however, *that* light. The advantages there spoken of are special in their nature, the description of them being contained in, and confined within that single clause; neither are they spoken of under the name of *benefits*. They are benefits, if to be instructed, and employed, and maintained, are benefits: but they are not therein spoken of under the name of benefits; much less as the benefits comprising *the* benefit of the Act.

If they were, we might cry with Archimedes, ευρηκα, we have found it: for to these benefits the statement of the title is as explicit as could be wished. Who are the persons entitled to these benefits?—Answer, *All persons wanting relief.* If these were the same persons as those alluded to by the expression, *any person entitled to the benefit of this Act*, with what advantage, in point of brevity as well as precision, might the former expression have been substituted to this latter.

If, then, it be really the case that by the words "every person entitled to the benefit of this Act," is meant neither more nor less than "*all persons wanting relief*," the secret is out, —the mystery is unravelled. But if all persons wanting relief are really to be let in, why are they to be thus muffled up? why all this pains to put them in masquerade? Throwing away the surplusage about *benefits* and *titles*, why not say simply, "All persons wanting relief;" or even more simply still, "all persons;" for if relief is to be had in such quantity, and on such terms, it may be difficult to say who it is that will *not* be "*wanting*" it. The adjunct *wanting* relief, may be the more easily spared and added to the heap of discarded surplusage, inasmuch as if a man wants relief it is intended he should have it, and if he does not want it he will not ask for it.

Unfortunately we are still at sea. The hope of a safe landing, though at such an expense of words, and after so much buffeting from clause to clause, is still but a pleasing dream. The want of relief is not sufficient to entitle a man to the benefit after all; for in the 19th Section the case is put of a man wanting relief; and it is, if not expressly stated, yet necessarily implied, that a man may want relief, and yet not be a person entitled to the benefit of the Act, "in case (says the Bill) the person wanting relief shall be a person entitled to the benefit of the Act;" so that now we are as much at a loss as ever.

Moreover, in Section 3, the being "entitled to the benefit of this Act" is one thing, and the wanting relief another; for both conditions, it is there expressly provided, must concur, before a man can be admitted to receive the bounty there provided, namely, money to buy a cow.

Another thing which we learn from that same clause concerning the benefit of this Act, is, that the receiving money to buy a cow does not constitute the benefit of this Act, nor, indeed, so much as any part of it, since the benefit of this Act is a distinct thing, which a man must absolutely be entitled to before he can take his chance for receiving this money for the purchase of a cow.

I said but now, *if this clause is to be trusted to;* but that this clause is not altogether nor exclusively to be trusted to, will appear from another section to which, however, it makes no reference. Should any one, in the course of his pursuit after the true intent and meaning of the Bill, be led to take any such stride as that from the 16th Section to the 21st, he will there find it written, that in regard to relief, if that be the benefit, or among the benefits of the Act, in order to be entitled to this benefit, for such it will not be denied to be, whatever may be thought of the benefits of the Act, it is not altogether sufficient to be a person, nor yet to be a person wanting relief; for that there is a sort of person who, be his want what it may, is not to be considered as "entitled to any relief from any parish or united parishes." —"No poor person who shall refuse any work offered to him or her under the authority of this Act, which he or she is able to execute, or to receive instructions for executing such work, or who shall not, on request made, according to the directions of this Act, permit all or any of his or her family, who are able to work and cannot otherwise support themselves, to be employed under the authority of this Act, shall be entitled to ask, demand, or receive any relief . . . . except as hereinafter is provided."

Here, if anywhere, one should have thought was the place for speaking of the *benefits of this Act;* in which case, if we had not learnt in direct terms who *are* entitled to those bene-

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fits, we should at any rate have learnt who are *not*, which is one step towards it. Instead of that we have the very general and extensive word *relief*. Thus much the mention of the word *relief* will be apt to do, to put a man in mind of the benefits of the Act; but this is to raise doubts, not to solve them. Is *relief* precisely the same thing with the benefits of this Act? It covers a great deal of the same ground certainly; but, if tried in the geometrical way of superposition, we should find it, in some parts of its extent perhaps, overhanging the benefit, in other parts, at any rate, falling short of it. The advantage of being put out apprentice can hardly be termed relief; and yet this, wherever the Bill has more benefits than one belonging to it, is surely one of them. Instruction, if instruction be a benefit, is another of the benefits of the Act; yet this is certainly not comprehended under relief, for it is expressly put in contradistinction to it: no instruction, no relief; and so with regard to employment. Besides, in the cow-money clause, (Section 3,) as we have already seen, the benefit of the Act is one thing, relief another thing; the benefit is a sort of thing he must *be entitled to*, the relief a sort of thing he must *want*, in order to take his chance for getting the cow-money. Yet, while it thus falls short of the full measure of the benefit or benefits of the Act, it extends, or at least wears the appearance of extending, beyond the Act, for it extends to whatever relief can be found to be provided by all the existing Poor Laws put together. This sends our inquirer upon the hunt over the whole body of the Poor Laws, for the purpose of picking up the several crumbs of relief, the several constituent elements of the general mass of relief provided by those laws, for the purpose of taking measure of the aggregate, and comparing it with the aggregate mass of the benefit or benefits provided by this Act.

It may here occur, that in proportion as the difficulty of finding out receivers for the bounty increases, the arguments that turn upon the alarming magnitude of the bounty will be losing their force; and that, if, after all, no claimants for it should be found, the mischief of which so much has been said in this comment will be as ideal as the benefit of which so much is said in the Act. But not to mention that the benefit of a parliamentary revisal is yet in store, let it not be thought that, because the draftsman has not perfectly succeeded in finding out the objects of his bounty Bill, there may not be others who will find them for him.

"Hunger," says the proverb, "will break through stone walls;" it will find still less difficulty in making its way through mists: and whether it be from humanity, (for humanity, howsoever misguided, ought not to be robbed of its name,) whether it be from humanity, or from some of the less pure motives above hinted at, the efforts of those who may conceive themselves invited to put in their claim to the bounty, are not likely to pass everywhere unseconded by the corresponding efforts of those who may conceive themselves called upon to dispense it. In a word, the obscurity may plague the magistrate, but it will not prevent the mischief. Obscurity is the source of every mischief; it is a remedy to none.

The conclusion is, that I am altogether ignorant who they are that are entitled to the benefits of the Act, and how to find them; and in this I am altogether positive. Should anybody else be more fortunate, (it is not easy to be more diligent,)—any one of the million, for example, who have been set a gaping for these benefits,—let him accept my congratulations and my envy: I envy him and give him joy.

Conclusion.

To give a short specimen of prolixity, to give a clear picture of confusion is no easy task. One efficient cause of unintelligibility pervades the whole Bill. Open it where you will, you find a benefit or supposed benefit spoken of as designed for somebody. Who is that somebody? The sort of person for whom the benefit is designed. Question. What is to accommodate? Answer. To accommodate is to accommodate. Explanation. As if I were to accommodate you, or you were to accommodate me. Question 2. Who then is the person to be accommodated? Answer. The person to be accommodated. Explanation. The person entitled to the accommodation given by the Act, the person for whom the benefit of the Act is intended. It would be something, if there were but one benefit, or *soi-disant* benefit running through the whole: unfortunately, there are as many benefits or supposed benefits almost as clauses, with as many different sorts of persons, into whose laps they are showered down by the hand of the learned draftsman, who, through the whole of its vast expanse, may be seen dealing out his favour like Merlin in the masquerade, in the character of Fortune.

Howsoever it may be with regard to contrivance, there is no want, at least, of felicity in the result. A composition of such bulk and such texture is examination proof; the lightest comment would find itself sunk down without redemption to the very bottom of the gulf of oblivion by the ponderosity of the text.

When observations to this effect, having this or any other production of the same pen for their subject, are made, (and the occasion presents itself as often as any such production presents itself,) one answer is ready, and a distinction is at hand. How much the world of industry is a gainer by the division of labour is well known: it can be no secret to any one who has ever opened a page of Adam Smith. It is thus, that in one branch of the department of the revenue, the province of the cocket reader has been separated from that of the cocket writer; it is thus, that in a higher branch of the same department, the offices of statute

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writer and statute interpreter, with or without that of statute understander annexed, have undergone a similar separation; the latter having, by an arrangement of some years' standing, been allotted exclusively to the Noble and Learned Lord who presides so worthily in the Court of King's Bench. At the end of a certain number of months or years, and at the end of a certain number of hundreds of pounds a-piece, the poor of this country, such of them as have more money than they know what to do with, may know by a knock at the noble interpreter's great gate, which of them this and that benefit was intended for: and then it will be, as if this or that mountain of words had been left out, and this or that word or two were inserted, which, to a plain and unlearned understanding, might as well have been respectively left out or inserted in the first instance.

This being the case, so long as Westminster Hall, the great mine of certainty, is open to all who have a golden spade to dig in it with, it seems perfectly well understood, as well at the Treasury as in Westminster Hall, that whether a Bill or an Act be or be not intelligible in the first instance is a matter of indifference. To enrich it with a proper quantity of surplusage is a necessary work: but to drop into it a single grain of original intelligibility would be a work of supererogation. *Certum est*, says a maxim of law, *quod certum reddi potest:* certain is that which certain can be made. The capacity of being rendered intelligible is an attribute that constitutes the *proprium in modo*, as logicians term it, of an Act; since, whether it has or has not a meaning of its own, the Court are bound to construe it, that is, to find a meaning for it; so that, in fact, it would be but an idle sort of business to be at the pains of giving a meaning to a composition, which, whether it have a meaning or no, can never be in want of one.

Carrying modesty to excess, it assumes no other title than that of "*Heads of a Bill*," as if there were not such thing as a word of surplusage to be found in it. On the contrary, so rich is it in surplusage, that a man might find enough in it and to spare, not only for a Bill or for an Act, but for a whole session full of Acts; and as to heads, a head is the thing of all others of which there is the least trace or appearance to be found.

In certain circumstances, to denominate is to characterize; to class is in effect to criticise. This and this alone is the sort of criticism which a work of the nature, I mean of the bulk and texture, of that which I have before me, will admit of.

With this single dissertation, the reader is now let off; want of the necessary time, despair of attention, despair of fruit; to these he is indebted for his dismission, even at this late period: certainly not, by any means, to any want of matter in the text. Fifty is the number of pages here bestowed on it, considered in this limited point of view. Considered in the same point of view, the same or thereabouts is the number of volumes that might have been bestowed on it, and with about equal cause. The same is about the number of volumes that may at any time be bestowed with about equal cause, on almost every law, while the form in which laws have hitherto been expressed continues to be observed. Reform in the mode of composing the laws, reform in the laws considered as laws, is reform in the instrument, in the very instrument by which all the work is done. Reform in the Poor Laws, or in any other branch of the laws, is but a reform in this or that branch of the work. Bad instruments can make nothing but bad works. Reform in the instrument, how remote soever in apparent use, is, in fact, prior in importance and in necessity to any reform that can be conceived to be called for in this or that corner of the field of legislative labour.

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THREE TRACTS

RELATIVE TO

SPANISH AND PORTUGUESE AFFAIRS;

WITH A

CONTINUAL EYE TO ENGLISH ONES.

TRACT, No. I.—LETTER TO THE SPANISH NATION ON A THEN PROPOSED HOUSE OF LORDS. (ANNO 1820.)

TRACT, No. II.—OBSERVATIONS ON JUDGE ADVOCATE HERMOSA'S PANEGYRIC ON JUDICIAL DELAYS; ON THE OCCASION OF THE IMPUNITY AS YET GIVEN BY HIM TO THE LOYAL AUTHORS OF THE CADIZ MASSACRE, A COUNTERPART TO THE MANCHESTER MASSACRE: EXPLAINING, MOREOVER, THE EFFECTS OF SECRECY IN JUDICATURE.

TRACT, No. III.—LETTER TO THE PORTUGUESE NATION, ON ANTIQUATED CONSTITUTIONS; ON THE SPANISH CONSTITUTION CONSIDERED AS A WHOLE, AND ON CERTAIN DEFECTS OBSERVABLE IN IT; IN PARTICULAR, THE IMMUTABILITY-ENACTING, OR INFALLIBILITY-ASSUMING, THE NON-RE-ELIGIBILITY-ENACTING, THE SLEEP-COMPELLING, AND THE BIENNIALITY-ENACTING CLAUSES.

BY JEREMY BENTHAM, ESQ.

FIRST PUBLISHED IN 1821.

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WITH A

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OF THIS SECOND* PUBLICATION,

Namely, On the then proposed Spanish House of Lords. (*Anno* 1820.)

To those who have formed any conception, how slight soever, of the state of political society in Spain, and in particular of the enormity of the shares, possessed by the privileged orders, in the landed property of the country: —by the clergy, not less than a third of the whole; by nobles of different classes, estates equal in extent in some instances to an average English county, and those estates so entailed as to be unalienable,—to any person so informed, it can scarcely be matter of wonder that endeavours should have been employed to insert into the Spanish Constitution, in addition to the assembly composed of the Representatives of the whole people, privileged and unprivileged together, an assembly composed exclusively of the Representatives of that comparatively small, though still too large portion, with powers to this small part, in pursuit of its own particular and thence sinister interest, to frustrate all measures proposed by the Representatives of the whole for the good of the whole. This is legitimacy and social order, under the matchless constitution, the envy and admiration of the world. This is what accordingly was proposed to be made legitimacy and social order in Spain. A curious question is—how it should have happened that the Old Man of the Sea, whose gripe still continues on the neck of the modern Utopia, should not, in the early days of the Spanish national assembly, have fastened himself upon the neck of Spain. Yet, somehow or other, such is the escape on which Spain, from early times, and, from her Portugal, in these times, have respectively to congratulate themselves. That, in such a state of society, endeavours to that end should have been employed, is nothing wonderful: the wonder would have been, if they had *not* been employed: the wonder is, how they should have failed of being successful.

While corruptionists and their dupes are in extasy at the sight of their Utopia with her stag-neck, and three Old Men of the Sea fastened upon it, Spain and Portugal are congratulating themselves on having each but one of them, and his hold growing every day looser and looser, while they are cheered by Yankeeland, whose neck has, for these forty years, been free from all such vermin, and who bids the habitable globe observe and declare, whether, in any and what respect, she is the worse for it.

At a time when those prospects, which are now so happily realized, had not so much as opened, the name of Bentham had become familiar to whatever was liberal in the great southern peninsula of Europe. That exclusion which the system of corruption has hitherto put upon it in England, the united force of Censorships and Inquisitions has never been able to effect either in Spain or Portugal. Spite of both those bars, scarcely had those works of his, which were edited in 1802 by M. Dumont, made their appearance in France, than they found their way into both the two adjoining kingdoms. Those works, with which, neither in Oxford where he took his degrees, nor in either of the other Church of England Universities, not to speak of Scottish ones, any candidate for the loaves and fishes could con-

* *Second*, viz. in allusion to the Tract on the Liberty of the Press, see vol. ii. p. 275.

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fess an acquaintance, without blasting the prospects of his life,—not only now are, but, almost immediately after their publication, were, taken in hand and fed upon at Salamanca and Coimbra: fed upon with a delight, the fruits of which have in both countries manifested themselves in the acts of the sovereign body, as well as in the speeches made in it; and, ere these pages have issued from the press, will probably in this country meet the public eye. In different parts of Spain, were read, (it may be imagined with what secrecy,) courses of lectures, of which those works formed the text-books: lectures, upon those gratuitous terms which, to patriotism and philanthropy, are so natural, to legitimacy and social order, so suspected and formidable. One of these lectures had a Lawyer for its reader; it was that Mora above-mentioned; another a Churchman: for it is only in England, that to Lawyers and Churchmen, with only here and there an exception, and still fewer that dare show themselves, everything that tends to reform or genuine improvement —everything, in a word, that tends to the advancement of the greatest happiness of the greatest number—is an object of horror and abhorrence. Of the above-mentioned works of Bentham, notice has reached this country of no fewer than three, if not four translations, as being finished and ready for the press, besides extracts in periodicals. But, on the one hand, such is the unavoidable bulk of those works, on the other hand, such the scarcity of money, and the smallness of the market for literary productions in general, nothing in that way from the Spanish press has yet reached this country, except a sort of analytical view, in a hundred and forty 8vo pages, having for a first title, *Espiritu de Bentham*, and for a second title, *Systéma de la Ciencia Social, por el Dr D. Toribio Nunez, Jurisconsulto Espanol*, breathing in every page the most rapturous admiration, and devoting to public reproach the government of his country, in case of their neglecting to make their utmost profit of the treasures thus offered to their hands.

Under these circumstances, it is not impossible that the Portuguese language may get the start of the Spanish: the Regency of Portugal having, in obedience to a special order from the Cortes dated the 13th of April last, already given commencement to a translation of the whole assemblage of such of his works as are not entirely out of print, according to the list that will be added to these pages.

While the great question above spoken of was in agitation, the distinguished Spaniard spoken of in the former tract just published, was urgent with Mr Bentham to come forward and throw his weight into that one of the two contending scales, towards which the inclination of his opinion was so naturally anticipated.

Of that application the present tract is the result. Upon its arrival at Madrid, it was with all despatch translated into Spanish, by the gentleman by whom it had, as above, been called for. As soon as an opportunity could be found, a plan of proceeding having been settled amongst some leading members of the Cortes, it was read in full assembly, in its character of an Address from Mr Bentham to the Cortes, and received with loud, abundant, and all but unanimous applause. An entry, there is reason to believe, was made of the transaction in the Journals of that House. But, whatever be the cause, as yet no copy of any such entry has in this country been received.

A document, expressive of the sensation made by it in one of the most distinguished and influential of the political clubs, by which the power of the tribunal of public opinion was then, and by some of them continues still to be, exercised at Madrid, had better fate. Being read at one of the meetings of the celebrated club mentioned in our newspapers as being held at the sign of the *Cross of Malta*, it was commented upon in an unvaried strain of eulogy. In conclusion, it procured for the author the quality of Honorary Member of that Society, as testified by a letter, the translation of which is subjoined below,* accompanied with a formal instrument of adoption, conceived in diplomatic language. Some months, however, had elapsed before the instrument reached London: such is the difficulty and uncertainty with which the intercourse between this country and that inland capital is embarrassed.

Before the advice, thus submitted by Mr Bentham to the sovereign body of Spain, had been presented to that Assembly, advice of a contrary tendency had, as may naturally be imagined, not been altogether wanting. An illustrious house in this country has the reputation—if not of giving birth to it, at least of having, with no small care and fondness, fostered it.

Be this as it may, some time before the question was brought before the Cortes, endeavours were used to form a ground for the pro-

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* "The Patriotic Society of the Friends of the Constitution, established at the Malta Coffee-house, has heard publicly read, from its tribune, the work which you have consecrated to the service of Spanish freedom: and, in proof of the gratitude with which the people in general, and this Society in particular, have received, and the estimation in which they hold this fruit of your illustrious labours, do themselves the honour of transmitting to you the title of honorary associate, saluting you with the feelings of the most cordial fraternity.

"Madrid, 18th Sept. 1820.

"El Ciudadano Presidente
PATRICIO MOORE.

"ANDRES ROGO DEL GAMYA,
"Secretario.

"MANUEL BARCELO,
"Secretario."

"Ciudadano JEREMIAS BENTHAM."

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posed Institution, by a reference to the place it occupies in the frame of the English Government. Of panegyric, there was of course no deficiency. Of the existence of a determinate Constitution, as belonging to that Government, the never-failing assumption was of course made. The opulence, power, and prosperity, in every shape so conspicuous in England, were on this occasion, as on so many other similar ones, brought to view, and magnified. The fallacy so regularly employed on those occasions, was employed on this. Of causes, obstacles, and uninfluencing circumstances, the usual olio was made. Whatever feature or degree of prosperity the institution in question had not been able to exclude, it received of course the credit of. If not in Spanish, at any rate in French, there was Blackstone, and there was De Lolme. Upon this stock, with the addition of whatever assistance may have been received from the above-mentioned great house, a man of distinguished literary celebrity and influence, Don Felix José Reynoso, set to work, and, under the title of "*Examen de los Delitos de Infidelidad*," (*Examination of the Offences of Infidelity*,) published a book in which the desirableness of an Upper House in the Representative system of Spain was much insisted upon. What was the precise species of transgression meant on this occasion to be designated by the word, "*infidelidad*," (the same in root, and everything but termination, as our English word *infidelity*,)—to what part of the field of thought and action the error thus imputed was meant to be represented as belonging—whether to that which regards conduct, or that which regards opinion—is more than can here be stated: nor, under that or any other interpretation, does it seem altogether easy, to discover the course taken by the ingenuity of the author, in making out the connexion, if any such there be, between either of the alleged errors above-mentioned, and the service promised to the people, by the introduction of a set of delegates, chosen by a comparatively small portion of the people, with interests opposite to those of the greater number, and with power to frustrate every endeavour which should have the greatest happiness of that greater number for its end in view. Whatever was the course so taken, the ingenuity displayed on this occasion, by the Spanish admirer of English Monarchical and Aristocratical vetos, in his endeavours to involve the subject in the customary cloud, seems not to have been altogether unsuccessful. At the then approaching election of Deputies from the province of Seville to the Cortes, a man, of whose regard for the greatest happiness of the greatest number, no doubt seems ever to have been entertained, Riego, so well known in England as well as everywhere else, as one of the three military men to whom Spain is principally indebted for her deliverance, scrupled not to propose him as being pre-eminently fit to serve in the Cortes for that Province, nor, on that occasion, to support him with all his influence. The virtues, moral as well as intellectual, of the illustrious publicist, were, by the still more illustrious soldier, enlarged upon in the warmest strain of panegyric. Whatsoever may have been the case with regard to the moral class of these virtues, to whatsoever was said in attestation and praise of those of the intellectual class, the most unqualified assent appears to have been attached. The more irresistible his powers of persuasion, the greater (it was said) will be the danger, if in such a situation they should come to be employed in giving their support to such a cause: to a proposed new part, by which, so sure as introduced, the force and effect of whatever is good in any of the other parts of the fabric, would be destroyed.

The opinion of the people in question had been formed: formed, after everything that had been said to them by the echo of the great English House against the offence of "*infidelidad*," and in favour of an additional sovereign body, composed of, and chosen by, a set of laymen, already favoured above the rest of their countrymen, nobody could say why, and a set of churchmen, of whom the best that could be hoped for was—that, as in England, Deans, Prebendaries, and Canons are, they should be Sinecurists. All that the felicity of Don Felix could find to say on that side, they had heard: and, for anything that hath as yet appeared, nothing had been said to them in print by anybody on the other side. All this notwithstanding, their opinion was decided against the Spanish House of Lords. Whether that opinion was altogether a groundless one is a question, in finding an answer to which, it seems not impossible that the following tract may afford to the English reader some assistance. To the English reader, the question cannot indeed be anything more than a mere matter of curiosity: so closely does he feel himself held in the embrace of the grand Boa Constrictor with a coronet on his head. Not so to the man of Norway: for, somehow or other, in that country, whether for want of food, or from what other cause, the crested and bone-crushing dragon is found not to thrive. On the declivity of an elevated rock, scarce able to keep his hold, he may be seen lying in a languishing state: the men, whose bones he would once have crushed, have become too many for him. The sceptre indeed, as it could not fail to be, is outstretched to save him. Glory to the man, should any such arise, by whom this instrument of despotism and misrule shall have been rightly dealt with: dealt with, as the Boa, where he is in vigour, deals with the people's bones.

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TRACT, No. I.

Letter to the Spanish Nation on a then (Anno 1820) proposed House of Lords.

MEN of Madrid, Members of the Cortes, People of Spain!—if the old man who thus addresses you is an intruder, listen to him with indulgence. He is not a *spontaneous* one; he would not have spoken had he not been *called*.

Among the subjects which I understand are before you, none is of more importance—none perhaps of so much importance—as the question, whether, in addition to a Sovereign Assembly composed of representatives, whom the *subject many* have appointed and can remove, there shall be *another*, composed of those whom the *subject many* neither will be able to remove, nor will so much as have appointed! If I may rely on the perhaps too partial anticipations of some amongst you,—my works on legislation having been fortunate enough, some of them, to be honoured by your notice, and, among the works of men foreign to your nation, these having been the only ones thus honoured—even my opinion, though it were but an opinion and nothing more, might, for the present, have its use. In presenting you with it,—naked, or little better than naked, of reasons, as you will see it,—the necessity of the case compels me to break through a habit, which, till now, has been a law to me. I mean, that of placing my whole reliance on the force of specific reasons, keeping my own insignificant personality as completely out of view as possible. To cover with these reasons, to the best of my ability, the whole field of legislation, has been the labour of my whole life. On these reasons, on every part of that field, I have placed my sole dependence. As to *opinion*—my own opinion—considered in the character of *an authority*—of a *leaning-stock* for the opinion of other men—let any man set it at as low a degree as he may in the scale of value, he cannot set it lower than it is set by myself.

Such as it is, however, I have been called upon to give it. Whosoever among you may be pleased thus to honour me, may behold it in this page.

In addition to a Supreme Assembly composed of agents whom the subject many have appointed and can remove, shall there be another composed of men whom they will not have appointed, nor will ever be able to remove? Spaniards! by the simple statement of it, is not the question already answered? Spaniards! think for yourselves! think whether, between an assembly of the *ruling few* thus constituted on the one part, and the interests of the *subject many* on the other part, there exists not a point-blank opposition, and that opposition an unchangeable one? Think whether there be a single *reform*—think whether there be a single considerable *improvement* in any shape—which a body of rulers, unappointed and irremoveable by the people, will not, on one account or another, deem it for their interest to oppose, and oppose with full effect? For this they will have avowedly full power: and for what purpose can any such power—for what purpose can a *veto*—be asked for, but to be used? So far as, in their own view, their own interests coincide with yours, so far indeed they will go. But, the unchangeable nature of man considered, can you, on any substantial ground, entertain any the slightest expectation of their going any further? And the rendering the separation of their own interests from yours as complete and as wide as possible, that yours may be made a sacrifice to theirs, can this ever fail to be their constant study? Their study, will it not on every occasion be, to give to the expenditure of government, and thence to the burthens that press upon you, the greatest extent possible, that, out of that expense, they may, in the shape of official emolument, extract the greatest possible profit for themselves and their connexions? Lawyers themselves, or in league with lawyers, their determination will it not be—to keep the amount of expense in judicial procedure, and thence of factitious delay and vexation, as high as possible, for the sake of lawyer's profit extracted out of the expense? For this cause will they not be inexorable in the determination to keep exposing the unopulent many to remediless injury, at the hands of the *opulent*, and, at the head of them, the *ruling few*; denying justice to all but these few, and selling it to them at a price which they would not endure to pay, but for the impunity and the power of oppression which they buy with it? To keep the necessity of having recourse to lawyers as cogent as possible, will they not keep the *rule of action* in a state of as complete uncertainty as possible? will they not even keep that indispensable instrument of *security* from so much as coming into existence? The boon, which even Napoleon granted—the matchless boon of a really existing and accessible body of laws—will they not remain for ever determined to refuse? If, on these points, your own experience will not suffice for you, look around you: look to the men alike situated, the men cast in the same mould, the men of law in every other country, and in particular in that from which I write.

You have heard of our English Constitution—of *high-born virtue* as the cause of it, and consummate happiness as the fruit of it. Circumstances have, it is true, rendered the government of the *few* less bad *here* than in any other country: that happy America alone excepted, which took from it all the good, leaving all the bad behind. Circumstances have

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rendered it less bad here than elsewhere; but as to *virtue*, judge of it from one fact:—you have heard of our *two parties*, the Tories and the Whigs: the Tories, oppressors and plunderers in possession; the Whigs their successors in expectancy. Can you believe it? According to a set of principles, openly and deliberately avowed by both parties, making fortunes for the ruling few, at the expense of the subject many, is the very end of government. You must, all of you, have heard of our late minister, *William Pitt;* you must, some of you, have heard of his right-hand man, *George Rose;* both leaders of the Tories. You must, all of you, have heard of *Burke*, *Edmund Burke*, the most illustrious of writers among the Whigs. Each of these men published, at different times, his pamphlet on the subject of finance—each of them, such is the depravity of the ruling few, feared not to speak of this as an acknowledged principle. I, for my part, have, at different times, published two *Defences of Economy:* one against that same George Rose, another against that same Edmund Burke; for, long before the Tory pamphlet was written or thought of, Burke, adding treachery and imposture to rapacity, had constituted himself an advocate for economy, for the very purpose of betraying it. I consigned these papers to a periodical publication, called *the Pamphleteer*, mixing them thus with Government pamphlets, that they might present themselves unawares to this or that eye which, by interest, or interest-begotten prejudice, would otherwise have been closed against them. I have there shown, that, consistently with the conduct, or even with the avowed principles, of these men, not a *maravedi* would be left in the pockets of the people—not a maravedi, which the *ruling few* would be able to extract for their own use. But in this unhappy country, to stop the progress of irresistible oppression and depredation, what signifies what I, what anybody, can write? The contest now is—not between Tories and Whigs: for, though divided against one another in the contest for plunderage, these, it has been for sometime seen, are, by a stronger community of sinister interest, united against the people. No: not between Tories and Whigs; but between the *ruling few* on the one part, and the *subject many* on the other, is the real contest. The subject many, if you believe their enemies, are enemies to property: their aim is—to take it, all of it, from its present owners, and divide it amongst one another. "No," say the subject many, "no such design either ever was, or ever could be, entertained by anybody: by any body of men large enough to make any the smallest commencement towards it; for, long before the property could have got into the undisturbed possession of the supposed intended sharers, the destruction of property would be complete: all property destroyed, all life would be destroyed with it: and, earlier than those of the proprietors, the lives of the destroyers themselves. Scarcely out of our seventeen millions could you find a thousand men blind enough not to see this:" neither, then, *have we* any such design, nor can *you believe* we have. But this design which you so shamelessly impute to us—this design which, carried to the extent you speak of, and in the situation of the persons on whom you throw the imputation of it, is so plainly impossible—this design of enriching one's self at the expense of others—this very design, not only you yourselves have from first to last been harbouring it, but you have all along been carrying it on: carrying it on to the utmost extent which you have found possible. For *us* to enrich *ourselves* at *your* expense is not possible; for *you* to enrich *yourselves* at *our* expense, is a design not only possible, but actually and continually carried into effect: carried into effect, and to the utmost extent to which it has been possible. Of late years, since the French revolution afforded you a pretence, so rapid have been your advances, that the increase of waste and corruption—waste for the purpose of corruption, corruption for the purpose of waste, and both for the purpose of depredation—has almost reached its limits; taxes are added to taxes, and produce is not added to produce.

With the exception of the few that have owed their rise to trade, think whether among those families which we behold seated on the summit of that eminence which is composed of power, opulence, and factitious dignity, there can have been any who have been raised by any thing better than depredation: licensed and irresistible depredation; depredation by that swarm of harpies which, in the field of government, have never been fabulous—by the harpy in the shape of the Soldier, by the harpy in the shape of the Lawyer, by the harpy in the shape of the Placeman, by the harpy in the shape of the Priest. Thus it has surely been with us: think whether it can have been otherwise with you: think whether it can have been any otherwise with any pure monarchy, with any aristocracy, with any mixed monarchy, with any other government, than the pure representative democracy—the truly matchless and unperishable government of the American United States. Leave, then, to each individual harpy the undisturbed possession of what he has: leave it to him, on the sole condition of his remaining quiet. But do not equip him for fresh mischief, as our cock-fighters do their cocks: do not, in addition to the claws which he *has*, arm him with *new* and iron ones: do not give him a *veto:* a veto upon every constitution, that can tend to set limits to the plunderage.

Magnanimous Spaniards! for years to come, not to say ages, in you is our best, if not our only hope! to you, who have been the most oppressed of slaves, to you it belongs to give liberty to Europe. Yes: to all Europe! nor in Europe is there that other nation that has a more incontestable or more urgent need of it than that in which I write. Now is your

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time or never. Fear not from this country any effectual opposition. True it is that the worst mischief the French ever did you was kindness in comparison with that which our rulers would do to you, rather than you should save yourselves. As they dealt with Genoa, as they dealt with Naples, as they dealt with the Netherlands, as they dealt with Poland, as they dealt with Germany, so would they deal with you: so, and as much worse as were necessary to prevent your salvation. Cooler, more determined, more inexorable enemies mankind never had, nor ever can have. But no such mischief, no, nor any considerable mischief is it in their power to do to you. True it is, that neither against French, any more than against English rulers, could you have any security but from their impotence. This, however, you most happily have at present, and this you will continue to have long enough for the consolidation of your independence. True it is, that the despots have, each gang of them, force enough for the destruction of its own subjects. But they have not, any of them—no, nor all of them together—force enough to destroy you. Men indeed—oh yes, *men* they have, and in superabundance. But money they have none; and without money, and money in large masses, men cannot be made to move.

Oh yes, my friends! put everything to hazard, rather than let in the menaced *veto;* the many-headed, the all-devouring, the insatiable monster, worthy successor of the Trojan Horse. In vain would any one pretend that its interest is the same with yours. To be free from arbitrary imprisonment, from forfeiture, from death, from torture, this, it is true, is their interest not less than yours. True, but then, in their own eyes at least, they have to themselves a dearer and counter interest, by which this vulgar and common interest is sure to be eclipsed. The security—the blessing which they could not hold without having you to share it with them—this they behold with disdain, this is without value in their eyes. The *power*—the *factitious dignity* by which they are distinguished—distinguished *from* you and above you—this *with them* is everything. For his own security then, will each of them be content to trust to other sources: to his own good fortune, to his own address, to that prostration before the footstool of power—to that "prostration of understanding and will," to which, to make everything else sure, he is determined there shall be no bounds: that "prostration of understanding and will," which, in so many words, his Lordship of London preaches to us.

Spaniards! in you is our hope; for this long time our only hope: save *yourselves*, you save *us;* save *yourselves*, or *we* sink. What *you*, till so lately *were*, we at this time are. If you had your slaughterers, we have ours: if you *had* your torturers, we *have* ours: if you have your embroiderers, we have our tailors. As to our liberties—our so much vaunted liberties—inadequate as they always were, they are gone: corruption has completely rotted them: preserved they cannot be; if ever in future possessed by us, they must be regained. Our government is already become a military one: if but a child cries, a troop is sent to quiet it. As to our Lawyers, they, whether on Benches or on Seats, are what they have always been, and, so long as monarchy lasts, always will be,—tools of power, tools to the Government, all of them, as soon as they can get into it; tools to the Opposition, some of them, that they may show themselves, and till they can sell themselves. Even in our *Soldiers* more hope have the friends of good government than in our *Lawyers*. As it is, the forms of it are all that remain; the substance is all gone: the shell we make a show with, the kernel is rotten. Seated—not by us, but by money or by terror, or at the best by themselves or one another, we behold in our representatives, as they call themselves, the most mischievous and most implacable of our enemies.

I who write this, haste to write to you while I am still able; I say, while I am still able: for all sense of security has long been fled from me. *Cartwright*, *Burdett*, are under prosecution. *Hobhouse* has already endured, manfully endured, his punishment: and, unless he saves himself by silence or desertion, punished over and over again, it seems his destiny to be. As to *me*, who, I hear it said continually, am more *criminal* than any of them—me, for the fruit of whose labours, criminal as they are styled, the honestest and wisest among you are, at this moment, if I have been rightly informed, calling aloud that they may press it to their lips; there is something—it belongs not to me to say what—that hitherto has saved me. But my hour cannot be far distant. Already, for what *I* have written, *others* have been punished. Not in the hermitage from which I write, but in some prison shall I die. I could not die in greater comfort than by dying in your service.

JEREMY BENTHAM.

ADVERTISEMENT TO TRACT THE SECOND.

The occasion, on which the paper that forms the subject of these remarks, was published, is that of the ever-memorable massacre perpetrated at Cadiz, the principal sea-port in Spain, the principal seat of commerce in that country—the city next in population to the Capital. The day on which this tragedy was acted, was the tenth of March, 1820. For its declared

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object it had the preservation of that state of things which, under a despotism, is designated by the words *social order;*—for its perpetrators, those who profit by—those whose particular and sinister interest is interwoven with—the maintenance of that order; for its instruments, perfidy and treachery.

In the great contest which, now for about half a century, has been carrying on in the field of the habitable globe—in the contest between the *many* and the *few*—this has not been one of the least conspicuous scenes. Impatience and cruelty have everywhere characterized the deportment of the ruling few, long-suffering and forbearance that of the subject many. In this contest, the object of the greatest number has, of course, all along, been that which, on pain of their extinction, it can never cease to be—the greatest happiness of the greatest number: of the ruling few, under the like impulse, the greatest happiness of the ruling few. By the greatest number—by the subject many—*their* object—their real object—has nowhere—has never—been disavowed: it has not been, it never can be, an object for them to be ashamed of. By no motive could they have been led to disavow it. By the most irresistible impulses, they have, everywhere and at all times, been impelled to the avowal of it: all their prospects of success have depended on the extent given to the avowal made of it. Not so the ruling few. Consistently with common decency, consistently with common prudence, consistently with any hope of advantage, consistently with any assurance of security to themselves, at no time, nor anywhere, can their object have been, or in future be, avowed: to say to the subject many, sacrifice your happiness to ours, would be to say, be fools, that we, for our own profit, and at your expense, may be knaves.

Being thus, by the very nature of their claim, precluded from the use of *reason* in support of it, they have been driven by necessity to lay hold on *custom*, as the only support that could be found for it. The government—the unbridled government—of *one*, being the simplest possible form of government, and that to which, in the early stages of society, each horde found itself, under pain of immediate extirpation, necessitated to submit itself during its warfare with the neighbouring hordes, of which warfare either the existence or the immediate expectation was incessant,—this was the form of government that succeeded everywhere to primeval anarchy. For a long time, if, on any occasion, power felt any such sense as that of restraint, it was only from momentary and easily assuageable dissatisfaction: not till after a long course of mutual and variously terminating struggles, could it have anywhere, as here and there it has done, found itself under the necessity of submitting to any determinate and settled limitations. In comparison with the political communities in which all such limitations remain still unknown, few are those in which any such galling shackles have had or have place. Hence it is that, subject or not subject to this or that limitation, submitted to for the purchase of the voluntary support of the sub-ruling few, everywhere has the government of *one* had *custom* for its support. Hence it is likewise that, while Monarchy and Custom have everywhere had *Reason* for their adversary, with exceptions to a correspondently small extent, and those of scarce any other than a recent date, they have had reason*ing* and reason*ers* for their support. Everything being to be hoped from the support given to the claims of the one and the few, nothing to be hoped, but everything to be feared, from support given to the cause of the many, and on this part of the field of discourse, the great mass of the language, as it stands, having had for its manufacturers those reasoners upon paper, who all the while have been reasoning under the yoke of this sinister influence, the language furnished by *custom* for the occasion, has been everywhere a tissue of fallacies, spread abroad for the support of it.

Hence, as part and parcel of that tissue, the jargon, the contents of which, on this field, Custom has engaged men to accept at one another's hands, in lieu of reason. Over and above those fallacies, which require, each of them, a sentence, or perhaps a paragraph, to give expression to it, and of which a list in some detail has been given in another work,* —hence those still more commodious fallacies, for the propagation of which a single phrase, or even a single word, is sufficient. Witness, *dignity of the crown, dignity of the throne, splendour of the crown, splendour of the throne, matchless Constitution, English institutions.* Witness *legitimacy, order, social order.* By a custom, commenced by paid and enlisted, reinforced by gratuitous and deluded scribes, all these imaginary and verbal blessings have been placed in the catalogue of things to be cherished and maintained: to be maintained, all of them, with equally ardent devotion, and indefatigable perseverance. Of the greatest happiness of the greatest number, nowhere, till of late years in the united Anglo-American states, nowhere, without absurdity could it anywhere have been stated as belonging to the number of those things which ought to be *maintained.* Why it could not, will be seen as soon as mentioned: that which is nowhere *established*, cannot anywhere be *maintained.* No objection, it is true, is this to its being put upon the list of those things which ought to be established. Accordingly, now that in that only seat of established good government, it is already upon the list of those things which ought to be maintained, and now that, in some political communities, it has been put upon the list of those things which ought to be established,

* See The Book of Fallacies, in vol. ii. of this collection.

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and which with all their energy, men are labouring to establish,—even the best paid, even the most hungry, even the most strenuous supporters of the claims of the ruling *one* and the sub-ruling *few*, see no hope of advantage from any direct denial opposed to so uncontrovertible a position, as that the greatest happiness of the greatest number ought everywhere to be established. In the diverting of men's attention from that sole basis of good government, is their only hope; and hence it is that, from Thrones, and Houses, and Benches, the ears of the people are so indefatigably plied with the confused and senseless din, composed of matchless Constitution, English institutions, wisdom of Ancestors, dignity of the Crown, splendour of the Crown, dignity of the Throne, splendour of the Throne, balance, mixture of classes, wash (or something else) that "works well," Holy Religion, Licentiousness, Blasphemy, Atheism, Jacobinism, Legitimacy, Order, Social Order, with *et ceteras* upon *et ceteras*.

Let Reason be fruitful, Custom barren, is among the aphorisms of Lord Bacon. In saying this, he said what he wished to see, assuredly not what he saw: in the field of government—in this field, beyond all others—Reason (and we have seen why) breeds like a shemartin; custom, like a doe-rabbit.

Finding themselves hemmed in on all sides—sure of discomfiture and overthrow, should they, on any occasion, venture to act upon the field of reason—always dissatisfied with themselves—always condemned by conscience, always beholding, in the prevalence of reason and the spread of intellectual light, the downfal of their power—the temper prevalent among the oppressing tribe has, always and everywhere, been congenial to this their situation; their conduct to their temper: their temper feverish, their conduct sanguinary and atrocious. In the many, the sacrifice of whose interest to their own has been their constant object and perpetual occupation, they could do no otherwise than behold so many constant objects of their contempt and hatred: of contempt for their actual patience, of hatred and *that*, notwithstanding the contempt, never altogether clear of alarm, from the unassuageable apprehension of the ultimate cessation of that patience. Makers and Masters of the laws, death and torture, in rich variety of shape, they have spread over the whole contexture of those laws, for the gratification of those angry passions, and for the maintenance of that order, to which every word from the voice of Reason, sounded in their ears as pregnant with disturbance. Hence the apparatus of gibbets, halters, axes, pillories, chains, and dungeons: hence the anxiety and abundance with which the musket and the sabre are at all times kept in store; kept in store, and, by the despatch and extent given to their operations, held in preparation to anticipate, support, and relieve the labours of the judicatory. Hence the implacable enmity to the liberty of the press: hence the indefatigable exertions for the extinction of it. Hence the Association, self-styled *Constitutional*, headed by the heads of factitious religion and standing armies, at the invitation, and to the emolument, of lawyers: the too real association, formed for the protection of a non-entity, by the destruction of whatever good was ever spoken of as belonging to it.

The causes have now been seen of that contrast which, since the commencement of the great contest above spoken of, has, at all times, been exhibited, between the conduct of the ruling *one* and sub-ruling *few* on the one hand, and that of the subject and suffering *many* on the other.

Of the two so opposite systems of political action—that which has for its object the greatest happiness of the ruling few, and that which has for its object the greatest happiness of the subject many—would you see at one view an exemplification as striking as it is instructive! Look to the now so happily independent Anglo-American States. Look back to the state of things in that country, at the period of the great contest, of which it was the scene. Note well the several systems of warfare, on which the two contending parties were prepared to act. Look first to *legitimacy*, and *matchless constitution*: mark the fate, which, in case of success to their side, they had prepared for *their* adversaries: strangulation for necks, amputation for heads, laceration for bowels, severance and dispersion for quarters: and, lest all this should not be sufficient for the punishment of the so-styled guilty, denial of justice for creditors, purposed indigence for untried and unaccused wives and children, purposed indigence even for indeterminately distant kindred, whether sharers in, unapprised of, or even adverse to, their designs:—for all these, in indeterminable and unheeded multitudes: for, such is the inscrutably complicated result—wire-drawn, nobody knows when, by nobody knows what King's creatures, in the situation of ever removeable Judges, out of so short and irrelevant a phrase as *corruption of blood*: a phrase, invented by the corrupt in will and understanding, for a mask to the atrocity, by which, in such countless multitudes, the confessedly innocent are pierced through and through, for the chance of conveying an additional pang to the bosom of the so-styled guilty, whose proper powers of sufferance, it is thus proved, were still, after being put to the utmost stretch, insufficient for satiating the appetite of groundless vengeance: vengeance, against which it was assumed that nothing could be said—because law had been made the instrument of it, and all-comprehensiveness and perpetuity had been given to it.

Such being the system, in pursuance of which, in case of success, under the orders of the all-ruling one, the ruling few were on that

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occasion prepared to act, as in such contests they never have failed, nor in case of success ever can fail to act,—mark now the system of counteraction, employed in that country, by the oppressed and subject many, for their protection against those destined perpetually impending, and perpetually threatened horrors. Look in the first place to the *commencement* of the contest: mark well the character of the measures of resistance, organized and put in action, before the sword was as yet resorted to. To treason-law, as above described, including *corruption of blood* as above described, what was it they opposed? Neither more nor less than the infliction called *tarring and feathering*. And this tarring and feathering, what was it? The substituting, to a part of the sufferer's usual clothing, a covering composed of feathers, made to adhere to his body by a coating of tar. Humiliation, by means of scorn and derision, was accordingly, it may well be concluded, a suffering actually sustained. But, to this mental, what corporal sufferance was added? None whatever. To the sufferance thus inflicted in the name of punishment on the person of the alleged offender, to this *properly-seated* punishment—what addition was made in the shape of *mis-seated* punishment? what punishment was purposely inflicted on those to whom no offence was so much as imputed? None whatever.

Look, in conclusion, to the *termination* of the contest: look to *Saratoga:* look to *York Town*. What, in the eyes of the victors, were the prostrate vanquished? Not rebels, not traitors: not anything but what Englishmen have been wont to be to French victors, Frenchmen to English victors—unfortunate, yet not the less respected, enemies.

Of the manner in which, in the season of ascendancy the subject many bear their faculties, would you see another exemplification? Cast a momentary glance on Ireland.* Behold the vast majority of the people in that country, objects of inveterate oppression and legalized depredation, victims of a system of studied and inexorable misrule, carried on through centuries. Under such provocation, mark their deportment, when circumstances had placed the power of retaliation in their hands. Look, in the first place, to the five or six years' period between the years 1778 and 1783. Compare the state of the country in that period with the state of it not only before but ever since: compare the conduct maintained there in relation to one another by those same universally contrasted parties, both of them having the contest in America, and latterly the termination of it, full in view.

Favoured by circumstances, favoured by the happy weakness of their tyrant neighbours, linked in the bands of a no less peaceful than free and voluntary confederacy, open to all whom situation permitted and affection disposed to enter into it, behold the oppressed *many*, rising up in arms. Scarce had they begun to show themselves, when, without a life sacrificed, without a blow struck, they saw the votaries of corruption, by the mere apprehension of what they were able to do and of what had been deserved at their hands, laid prostrate at their feet. For five years and more, by the confession of the most adverse parties, by the testimony of all journalists, of all historians—the whole power of the country was in their hands. What was the use they made of it? What use, in the zenith of their power, did these Irish Insurgents make of those English supports of legitimacy and social order—axes, and gibbets, with their *et ceteras* as above? What use made they even of the American instruments of self-preservation—tar and feathers? None. What, in fine, viewed in every point of view, was the true, the universally undisputed, the indisputably proper appellation of this period of Irish history? Yes: it was the golden period, the no longer fabulous—the visible golden age.† Behold now the sad reverse. Unhappily for both islands, peace was at length restored to England. The hands of English tyrants were thus set free. What was the consequence to Ireland? The golden age vanished: the age of iron returned: the age of iron, and, with it, that scene of oppression and legalized depredation—of insolence on the one hand, of ever just and ever boiling howsoever smothered indignation on the other; thereupon came that conspiracy among the *few*, having for its avowed object the extermination of the *many*:—that conspiracy, of which it is so well known to everybody that it need not be said by anybody, who the men are, who so lately were avowedly, and because not now avowedly, are not the less determinately and effectively at the head.

Thus much as to the catastrophe. Now as to the actors. The men, by whom this golden age was thus created and so long preserved—what were they? What, but the men of universal suffrage? Yes: and by them in that island, and from that island in this, within a few years after its establishment in United America, would the system of universality, secrecy, equality and annuality of suffrage have been established, and the no longer fabulous golden age have been thus extended and

* See farther, with reference to Ireland and the Volunteers, "Radicalism not dangerous," vol. v. p. 599, *et seq.*

† See the Whig Biography of Mr Hardy, the Tory Observations on Irish affairs by Lord Sheffield, and even the Tory History of Mr Adolphus. "Let those who sneer at the Volunteer Institution, point out the days," (says Mr Hardy, *Life of Lord Charlemont*, p. 197,) "not merely in the Irish, but *any* history, when decorous measures kept more even pace with the best charities of life, when crime found less countenance, and law more reverence." —"Private property," (p. 198,) "private peace, were everywhere watched over by the volunteers with a filial and pious care."

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perpetuated, but for the unhappily restored peace above-mentioned, in conjunction with the treachery of certain of the people's pretended friends; one of whom, in the teeth of that same five years' fresh experience, had the effrontery to speak of universal division and consequent destruction of property, as the certain consequence of that very state of things, which, having under the eyes of all men, but in a more particular manner under his own, been so recently experienced, had produced none but the most opposite—unprecedentedly opposite effects.

Look at this moment to Portugal: behold that now magnanimous and regenerated nation, casting off at once the double yoke of a domestic and foreign despotism. Before the auspicious day arrived, think what had been the oppression on the one hand, the forbearance on the other, the wretchedness in consequence: read it in the documents of the time. Since that auspicious day, inquire what has been the vengeance: inquire ever so sharply, no such thing will you find.

Warmed by the subject, the pen has been running riot. Recollection commands it back to Cadiz.

On the 10th of March, 1820, at a moment of general festivity,—the assembled multitude being no less peaceful, no less unsuspecting, no less crowded, no less defenceless, than, in the preceding August, they had been at Manchester,—at the instigation—not of a simple Priest, but of a Bishop—a selection, carefully made from the refuse of the army, fell upon the people, and, not with cutting weapons only, but with fire-arms, commenced an equally indiscriminating slaughter. As to the number of those slain on the spot, accounts vary from three hundred to between four and five hundred; as to the wounded, they agree in estimating it at a thousand.

The triumph was not of long duration. The cause of the people finally prevailed; the authority of the law, such as in that country it is, was restored. But the law thus restored, was itself the law of tyranny. It was a system of law, which had for its end in view the same as that of matchless constitution, envy and admiration of the world: which had for its end in view, in a word, (need it be mentioned?) the establishment of the greatest happiness of the *ruling one* and the *sub-ruling few*, at the expense, and by the sacrifice of the greatest happiness of the greatest number. Amongst other tribes of the ruling few, the establishment of the greatest happiness of the lawyer-tribe,—manufacturers of an unassailable tyranny, the necessary and ever ready instrument of every other tyranny.

In Spain, as, with scarce an exception, in every other of the countries governed by Rome-bred law,—effectual care had been taken, that, in all cases, in which the sinister interest of the ruling one was concerned, the fate of the accused should be completely at the disposal of an ever-obsequious instrument of that same ruling one: a judge, nominated, and at all times removeable, by his fiat: and that, for that purpose, the proceedings in general, and the collection of the evidence in particular—of that mass of information, on the collection of which the result of every cause necessarily depends,—should, from first to last, remain covered with a veil of impenetrable secrecy. In England, only in cases where *property* is at stake, does this last-mentioned security, for injustice, corruption, and official depredation—this secrecy in the collection of evidence, stand as yet established: any designs formed by the head of the law upon jury trial—any such designs, howsoever intimated, not having as yet been particularized and brought forward: and though when the whole of the richest man's property is at stake, property is thus disposed of by the instrumentality of secretly collected, or, as in bankruptcy cases, by that of uncrossexaminable evidences—still, in smaller masses, it is left to be disposed of, by a system of evidence, which, how replete soever with absurdity and inconsistency, is, upon the whole, somewhat less flagrantly and completely hostile to justice.*

TRACT, No. II.

Observations on Judge Advocate Hermosa's Panegyric on Judicial Delays; on the Occasion of the Impunity as yet given by him to the loyal Authors of the Cadiz Massacre, a counterpart to the Manchester Massacre; explaining, moreover, the Effects of secrecy in judicature.

Complaints, I observe, have been made, of the delay experienced in the case of the Cadiz massacre. Of a paper, signed, according to the English translation, "Sanlucar de Barrameda, 20th August, 1820, the judge of instruction, Cormel Fiscal Gaspar Hermosa," the professed object, is—to satisfy the Spanish people, that, from this delay, misconduct is not, in any shape, justly imputable to that judge. The business in question, is the business of the day.

* It being the author's intimate conviction, deduced from the consideration, as well of the universal nature of man, as of the whole *compass of* particular facts, that on the one hand in *Radicalism there is nothing dangerous* to property or genera

But, on the occasion of this business, I see principles avowed, the influence of which is of as lasting a nature as that of the system of law, of which they make a part, and from which they were imbibed.

"I remind the public," (says this judge,) "I remind the public, that *delay* in judicial proceedings, is a *tribute* which is due to justice, and, as it were, the *price* at which the security of the citizen is purchased: that the *judicial forms are*"—(if, instead of *are*, he had said *ought to be*, his proposition would have stood rather clearer of dispute)—"that the judicial forms *are*—the shields of liberty, and *precipitation* the most dangerous rock in the way of justice."

This defence of his excepted, from no individual fact do I see any reason for suspecting that the functionary in question is chargeable with misconduct in any shape: that, for example, he has any improper connexion with the parties accused, or any of them: any improper connexion either by complicity, unity of affection, fear of displeasure, bribery, or corruption in any other shape. Of the particular facts belonging to the individual case, all that is known to *me* is known to everybody: and they are, all of them, in his favour: namely, that, on this melancholy occasion, both actors and witnesses must have been, in a degree seldom if ever exemplified in the annals of judicature, numerous: and that, whatever be the occasion, the greater the *number* of the persons to be examined, the greater, *cæteris paribus*, must have been the quantity of *time* requisite to be occupied in the examination.

What, on the other hand, is but too true, is—that if, to a man in his situation, the above charges were, all of them, justly applicable, and accordingly applied,—this is the exact complexion of the sort of defence, that he would make. It is the sort of defence, which any man, in what degree soever guilty, would have it in his power to make, and which every man, who is guilty, would, if he saw any probability of its being received and productive of effect, be sure to make. It is the sort of defence, which I will not say no man, who is innocent, would ever make, (for innocence does not necessarily give right discernment, either to the person who pleads, or to those before whom he pleads,) but which an innocent man, if he has right discernment, would naturally avoid employing: and for this plain reason—because it is the interest, and necessary object, of the man who is innocent, to render his case as clearly distinguishable as possible from that of the man who is guilty.

Yes: when a man is really innocent, the course he takes will, naturally speaking, be exactly the reverse of the course thus taken. It will not consist of *vague generalities* such as the above: of aphorisms, without applications. No: but, as far as time and space will permit, he will hold up to view, in all their circumstances, the individual facts by which his innocence may be made manifest. In the present instance, for example, number of days of sitting, and hours in each day: number of persons that have been examined on the several days: number of persons that, as far as known, remained to be examined, &c. &c.

Instead of this, or anything like it, what does this judge? Addressing himself to the Spanish public, as a schoolmaster to his scholars, he recalls to their minds, in the form of maxims, certain lessons which, in his view of the matter, are in danger of not being sufficiently present to their memories. To each of these several maxims, I shall proceed to give a separate examination: namely to the end that it may be seen how far they are conducive, or repugnant, to the incontestably proper ends of judicature.

If, in my view of them, the evil tendency of the principles thus inculcated were confined to the screening of one individual, or a limited number of assignable individuals, from just censure, never would this pen have employed itself, in a task so ill-adapted to the situation of one who is a stranger to the country in which the facts had place. But, in my view of them, the *tendency*, though it were too much to say the *object*, is—to provide a screen for malpractice, in every shape, on the part of all Judges, to the prejudice of the subject many in all places, and at all times: a screen for all individuals in that situation, and, at the same time, for the system under which they act: a system which, in my view of it, has, all along, had misrule, in that shape, for its very object, as well as for its effect: a system, on the utter extirpation of which, in my view of it, the ultimate salvation of Spain, and of every country that has broke loose from the trammels of despotism, depends.

1. Maxim the First:—maxim as to *delay*. "Delay in judicial proceedings, is a *tribute*," (says he,) "which is due to justice, and, as it were, the *price* at which the security of the citizen is purchased."

That, to the operations, in the performance of which judicial procedure consists, as to operations of every other kind, *time* is necessary, is a truth, of which, if that was his meaning, it needed not a remark from a public functionary to remind us. But, by the mention of the word *price*, what is insinuated is this—namely, that whatsoever be the occasion, the greater the quantity of time is, that elapses before a definitive decision is known to have been pronounced, the greater the probability is, that the decision will be conformable to justice: for, generally speaking, the higher the price

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security in any shape, on the other hand, in *Despotism* there is that which is everlastingly and most seriously *dangerous to itself*, he had made considerable advance in both researches, when stopt for the present at least, by other calls of a still more urgent nature. To see both topics in other and abler hands would afford him the sincerest pleasure.

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you are content to pay for your goods, the better the goods are that you will have. But if, in the case of delay, this were true, the surest way of pronouncing a right decision would be, never to pronounce any decision at all: for, in that case, the price paid would be the very highest price possible.

On the other hand may be seen a truth or two, of which our instructor himself seems to stand somewhat in need of being reminded: namely—that, though operations are performed *in* time, they are not performed *by* time; that the professing to be employing one's self in the performance of an operation, and the being actually so employed, are not exactly the same thing; that, while delay increases, recollection weakens, and the very sources of evidence vanish; that *delay in judicature* is, so long as it lasts, *denial of justice*, and that a panegyric on delay is, therefore, a panegyric on denial of justice.

True it is that to the quantity of delay, that, by possibility, may be necessary to rectitude of decision, there is no certain limit. Why? Because there is no certain limit to the quantity of time that may be necessary to the collection of this or that piece of evidence. But mind the artifice. Under the sanction of the pretence formed by vague generalities such as these, what is true of no more than one cause out of a hundred, is applied to the hundred: a cause which might be despatched in twenty minutes—(and of this sort is by far the greater number of causes)—is made to occupy twenty years: and a cause, which, by the attendance of both parties, in the presence of a single judge, in an open judicatory, the bystanders, rendering the service that is pretended to be done, but never can be done by a judicatory of appeal, might be terminated without expense—is, for the sake of the profit upon the expense, nursed and kept alive; kept alive till the party, whose condition, in respect of pecuniary circumstances, is least favourable, is —if alive, alive in the pit of ruin, and his adversary more or less near to it.

Unfortunately for justice and for mankind, in regard to the use made of the word *delay*, an imperfection there is, under which, language seems, very generally, to labour. Two objects there are, for the designation of which there is but this one word, though, between the objects themselves, the distinction is not only clear and perfect, but, for the most important purposes, is continually requiring to be brought to view: namely, on the one hand, an addition stated as being made to an already allotted quantity of *time;* that statement not being accompanied with any consideration of the propriety of the so allotted quantity; on the other hand, an addition, the quantity of which is considered as being *excessive*. In this unfortunate ambiguity, the supporters of all systems of judicature contrary to the ends of justice, find a most useful instrument of defence. "Delay is, frequently, necessary to justice: namely, delay without excess: therefore, so" (say they) "is delay in excess; for delay in excess, is delay; and delay, you cannot deny, is necessary to justice." Such is their argument; and such the logic of it.

On the present occasion, speaking as he does, of delay as a tribute due to justice, in which of these two senses would this professor of justice wish us to understand the term he thus employs? Delay without excess? the proposition is a nugatory one. What ought to be done, ought to be done: such is the instruction conveyed by it. Delay in excess? the proposition is an absurd and false one.

2. Maxim the Second. *Precipitation is the most dangerous rock in the way of justice.* Here, after another subject (of which presently) has been passed on to, up comes the same fallacy again in other words. *Precipitation?* What can be meant by it, but *despatch*, or *promptitude in excess?*

As to the maxim, setting aside the rhetoric of it, what is the plain import of it? That the quantity of time you employ—or at least profess to employ—in the operations of judicature, ought not to be insufficient: it ought not to be what it ought not to be.

Let it but mean anything—give it but a determinate meaning—the very reverse of it will be seen to be true. Numerous, indeed, are the modes of mal-practice to which the term *precipitation* might, without impropriety, be applied; speaking in general terms, in regard to any operation whatever, that, in the case in question, happens to be necessary to right decision, the omitting to employ the whole or any part of the quantity of time necessary to the performance of the operation, and thereby putting an exclusion upon the operation itself: in particular, putting, in this way, an exclusion upon such or such an evidentiary document; upon the attendance of such or such a witness; upon such or such a material question to such or such an attending witness; upon the answer, or any part of the answer, that would or might have been given by him to such or such a question; upon such or such a comment that would otherwise have been made upon his evidence. But the sense, in which, of all imaginable senses, it seems most likely to be understood, is—the omitting to employ more or less of the whole time that would have been necessary to a man, to form, by means of *reflection*, a right decision, on such grounds of decision as, in all shapes taken together, have been actually presented to his view: in a word, a deficiency in the time necessary for reflection.

Precipitation in judicature being thus understood, and admitted to be a rock, now let us see whether, of all imaginable rocks, this is really the most dangerous.

Look to English judicature. Adverse as, in so large a part of its extent, the system is—uncontrovertibly adverse—to the ends of justice—still, taken as a whole, it is, perhaps, the least so of any as yet anywhere established:

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strange indeed it would be, if it were not much less so than that of Spain. Of the two distinguishable branches of this system of procedure, namely, the natural and the technical, the only branch commonly in view is the technical branch: of this branch, the part most highly, most generally, and least undeservedly esteemed, is that in which the judicatory is composed of a professional judge, with a company of non-professional judges under the name of a *jury:* the jury, in the exercise of their functions, acting, in so far as it is their choice to do so, under the guidance of the judge. Now then, in this case, how stands the dangerousness? If, in the business of judicial procedure, the danger from precipitation were so great as supposed; in other words, if the mischief from it is so great and so frequent as supposed, here, it will be seen, we have a case in which it would display itself in its utmost possible magnitude. But how stands the fact? So small, if any, is the mischief, that in no one instance perhaps as yet, has it ever so much as attracted notice: in no one instance, at any rate, is complaint known to have been produced by it. Now then, note how the case stands: No sooner is the evidence with such comments, if any, as have been made on it by the parties or advocates on both sides closed, than, without so much as a moment's *delay* taken for reflection comes, if at all, the opinion of the Judge: opinion or no opinion, immediately again, comes thereupon, as often as not, the decision of the jury. The promptitude thus displayed—is it in the power of *precipitation*, taken even in the bad sense, to exceed it? The same promptitude, again, has it ever, on the part of any person, been the subject of complaint? No, never. When promptitude, in this degree, has place, does it ever enter into any one's mind, that any such condemnatory or disapprobative appellative as *precipitation* is, on that account, applicable to it? No, never. If promptitude, in such a degree, (and, in no higher degree can it have place,) is *precipitation*, precipitation, so far from being the most dangerous rock on which judicature can strike, might, with much more propriety, in the language of the same rhetoric, be spoken of as the harbour towards which it is to be *wished* that its course should be directed.

Never, surely, was aphorism more unfortunate! What is the evil to which, in the scale of evil, the highest place is assigned by it. The very evil which not only is, in every country, the least mischievous, but in the country, in which the warning is thus given, the least probable.

Delay, as above—delay, so long as it lasts—is injustice: for it is denial of justice: and, whether blame accompany it or not, the effect to the parties is the same.

In precipitation, unless misdecision be the result of it, there is no injustice: with it, there may be folly, but, from it, there is no injustice.

In regard to delay, thus it is as to its immediate effects, in both branches penal and non-penal taken together, and considered with reference to its effect in the particular cause in which it has place. In the penal branch, consider now its effects on the whole complexion and character of that branch. In so far as punishment has place, from *delay* in excess comes *severity* in excess: for by delay, and in proportion to the delay, the *value*, and effective influence of the punishment is diminished: diminished, by diminution of *propinquity*, and thence also of *certainty*. But, on the back of this evil, comes another evil. What is wanting in *propinquity* and *certainty* is then endeavoured to be made up for in *magnitude:* and thus we have *severity* in excess.

But, again, from *severity* in excess, and thence, as above, from *delay* in excess, comes *inefficiency*. For, as the punishment increases in *magnitude*, here again it loses in *certainty*. For the efficiency of the punishment depends, *cæteris paribus*, upon the frequency of the known instances of its infliction, compared with that of the known or suspected instances of the delinquency which called for it. But infliction depends upon conviction, and conviction depends upon the co-operation of all operators necessary: necessary, in the several characters of informers, arrestators, witnesses, Judges, and functionaries acting under the command of Judges: and, in all these classes, to an extent proportioned to the degree of humanity that has place in the character of the age and country, those who would otherwise be co-operators, shrink from the task.* In Spain, of all countries, warn Judges against precipitation! Warn then the snail against running herself off her legs.

Rhetorician! if you must have a rock, keep to your rock then, but reverse the name of it. For *precipitation* say *delay*, and you will speak true. *Delay* not *precipitation*, will then be your name for your "*most dangerous rock in the way of justice.*" Thus, then, you have a *rock*, on which, in Spain, ever since *Rome-bred* law, with its system of procedure, has been ruling, Justice has been splitting: a rock on which, unless that chaos, with its rocks, be speedily annihilated, justice will, ere long, split to pieces, and the constitution along with it.

When the justice necessary to the keeping of society together cannot be had from judicature, it is looked for from despotism. Then does despotism itself, as being the minor evil, put on not only the colour, but even the character of good: as such, it is looked for, called for, exercised,

* In so far as regards severity of excess, its power in striking the law with impotence, stands in the eyes of all, and by the acknowledgment of all, exemplified in England, and more particularly at this time. Applied to forgery, the mere name of punishment,—the punishment of death,—has given increase to the number of forgeries.

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and, not altogether without cause, even applauded. And this is among the causes why, in the eyes of the lovers of despotism, a system of procedure repugnant in the extreme to the only true ends of judicature, is an object of indifference, or even of complacency.

Those who will have *rocks* cannot object to *harbours*. When factitious delay, the artificial rock set up by the confederated ingenuity of official and professional artists, stands in the way of justice—despotism, calm unruffled despotism, is the harbour, in which, whatever security is regarded as obtainable, will be sought. To the artists themselves, the change would be no evil, were they the only *harbour-masters*. But when in the hands of lawyers, despotism fails, recourse is had to priests and soldiers.

3. Maxim the third. "*The judicial forms are the shields of liberty.*"

The *judicial forms?*—*What* judicial forms? What, is not *said*, but what is insinuated, and doubtless meant to be understood, is—that such are the judicial forms of the Spanish edition of the system of Rome-bred procedure:—the system, under which the preacher of wisdom, in this shape, was acting, and under which, by the help of these convenient and well-worn aphorisms, he is thus endeavouring to find shelter. *Liberty*, indeed! What liberty? whose liberty? What in his dictionary means *liberty*? What? unless it be liberty to rulers to oppress subjects, and to lawyers to plunder suitors? Liberty, indeed! Why thus keep hovering over our heads in the region of vague generalities, but that he finds his procedure unable to stand its ground on the *terra firma* of individual and appropriate facts?

Be this as it may, how stands the case in reality? These *judicial forms*, what are they? What, but the *means* employed by judges in their progress towards the ends or objects, to which the course of the proceeding is directed, whatsoever are these *ends*.

Now, under the Rome-bred system of procedure in general, and under the Spanish edition of it more particularly, what are the *ends* towards which the course pursued by those who framed it, has at all times been directed? by those who, from time to time, have been employed in the framing of it, not to speak of the course pursued by those who, from time to time, have been acting under it. I will tell him what are these *ends:* they are the ends diametrically *opposite* to the ends of justice: they are the ends pointed out by the personal and other private interests of those by whom this power has been exercised: ends standing in constant opposition to the interests of the rest of the community, but more particularly to the interests of the *subject many*, in respect of the ends of justice: they are the sinister ends, to the pursuit of which the ends of justice have, to a greater or less extent, been everywhere made, and still continue to be made, a continually repeated sacrifice.

Liberty, indeed! shields of liberty! under the Rome-bred procedure anywhere—under the Spanish edition of it more particularly—is it of *liberty* that the forms employed are the shield? O yes! if, instead of *liberty*, we may read despotism, oppression, depredation, and corruption: with this one amendment, the maxim may be subscribed to without any the smallest difficulty.

What are the ends—the proper—the only defensible ends of judicial procedure? Direct, all-comprehensive, and positive end—*rectitude of decision:* collateral and negative ends, *reducing*, to the least possible quantity, the evils unavoidably produced by the pursuit of the direct end; namely, the evils comprised under the three heads, of *delay*, *vexation*, and *expense*.

Such being the only *proper* ends, what, then, are the actual ends—the ends actually pursued by those, by whom, in this, as in every other instance, the system of judicial procedure has been framed? If they have been men, these ends have everywhere been their own personal ends: the advancement of their own particular interests. And what have been those particular interests? On every occasion on which, in each man's view of it, his interest would be better served by misdecision,—misdecision accordingly: on all other occasions, rectitude of decision; this being pursued, according to the best of the man's judgment, for reputation's sake: for reputation's sake, that so, by probity, practised where it might be practised without sacrifice, power might be increased: that power, (for reputation is power,) under favour of which, improbity, coupled with impunity, might be practised, as often as advantage presented itself, in any sufficiently tempting shape, as the fruit of it. Thus much as to what regards the *direct* end of justice: then, as to what regards the *collateral* ends, the swelling, to the utmost amount, the aggregate mass of delay, vexation, and expense: the expense for the sake of the lawyer's profit extractable out of it: the delay, with its attendant vexation, for the sake of the opportunities which it affords for addition, to the amount of profit-yielding expense; of profit-yielding expense, in all cases; and of misdecision in every case, in which it presents itself as prescribed by personal interest in any shape, as above.

The founders of this same system, were they men? or, if not, what were they? If men, then so it is that, in the circumstances in which they acted, unchecked as they were, free as they were from all check, applied or applicable by the subject many, whose interests they were thus disposing of—such, in the framing of the system, could not but have been the *ends* that, from first to last, they had in view. For, on the constantly prevailing habit of self-preference, does the human species depend—depend, not merely for its happiness, but for its existence. No rule more important for the legislator's guidance; no rule, on which, with stronger determination, his eyes, should, as

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every occasion, remain fixed; no rule, against which the eyes of men in general are more obstinately closed. Yes: self-preservation it is that is the *necessary* occupation, and, with the exception of maternal care, the only necessary occupation: Yes; on any extensive scale, social sympathy, and the conduct that flows from it, is an article of luxury—the luxury of the most highly polished life: the habitual enjoyment of it, the privileged endowment of here and there a superior and superiorly cultivated mind.

Delay, vexation, and *expense*,—these, in conjunction with *misdecision*, compose, in all its modifications, the aggregate mass of all the evils to which, taken by itself, the system of judicial procedure is liable to give birth. Add *uncertainty*, an evil, in the generation of which, the main body of the law, whether by its silence or by its language, shares and vies with the system of procedure: add these together, you have the aggregate mass of evil, of which is composed the patrimony of the fraternity of lawyers: of the man of law, in all his shapes: of lawyers, of all classes, and all ranks: of the attorney, of the advocate, of the judge, of his ministerial instruments: of these, and, above them all, of the patron, by whom the judge, in all his shapes, is appointed. Delay, vexation, and expense, as well in their natural and inevitable, as in their factitious, and purposely organized, forms: of evil in all these shapes, as well in that in which it is the purposed work of man, as that in which it is the work of that power, into the designs of which no human eye can penetrate. No: in no branch whatever, in no place, at no time whatever, can any system of government, that we see, or ever have seen established, have been directed to any other object than the particular good of those by whom it has been established: to the good of the *subject many*, no further than in as far as it appeared to the *ruling few*, that, by serving those beneath them, they were, in some shape or other, rendering service to themselves. From the eyes of the multitude, these truths, incontestable as they are, have almost universally been hidden: hidden by a covering of the thickest and most universally and indefatigably employed imposture. Yet, only in proportion as those same eyes are open to these same truths, can man be freed from the oppression, depredation, and debasement, under which, in every country, he still labours. In every country? yes: even in the Anglo-American United States. For, though not at all by despots, nor much by *priests*, even there is he deluded. Yes: deluded he there is; and in proportion to the delusion, preyed upon and oppressed by lawyers; by England-bred lawyers, whose iron-rod, having been in the night of servitude, is still in the days of independence suffered to be wire-drawn out of a system of sham law, and that of foreign growth—the English common law.

The good, whatever it be, that is derived from the judicial system, from whence, then, is it derived? From those things which are actually done? In a small degree, yes; but in a very small degree: in a much greater degree, from those things which, in the case in question it is how erroneously soever supposed, would, if the experiment were made, be done.

In the teeth of their own experience, deluded by those false conceptions, which, in books and speeches, the lawyer-tribe, with one accord, are so indefatigable in disseminating, it is among the expectations, for example, of Englishmen in general, that, for injury in any shape, law will afford them an adequate compensation. All the while, the fact, the incontested and incontestable fact is, that to a vast proportion, probably to more than nine-tenths of their number, the obtainment of any such compensation is, in every case, impossible. And, for the opposing a perpetual bar to any increase in the number of those to whom it shall be possible, leaders in both factions, corruptionists in possession, and corruptionists in expectancy, stood up but t'other day, stood up in declared confederacy. Stood up, and where? Even in that House, the very name of which is so happily become a name of reproach in Europe.

Thus stands the matter in England; the country in which, till the birth of the Anglo-American United States, the plague of lawyers was least destructive. But, if thus in England, how in Spain can it fail to be still worse?

To return to our official preacher of delay, the no less learned than gallant advocate of *Forms*, in the great cause of *Forms against Substance*. The body of his sermon, is now, it is hoped, understood. Come we now to the practical inferences.

On my zeal, says he, "I exhort them" (the public) "to depend." On his zeal, for what? Thus the explanation is at the same time given: his zeal to do what he is professing to do: "placing myself," says he, "above the influence of the passions, and listening only to the voice of justice?" And this zeal—by what was it called into action? By those laws, of course, under which he was acting: by the laws he speaks of, as those "which regulate the order of proceeding," those "inviolable laws" (so he terms them) "which," he says, "are the only safeguard of liberty."

Neither with the person of the gentleman in question have I any acquaintance, nor, in relation to the reputation he bears, have I received any the slightest intimation: in relation to him, all that I have any conception of is—the official situation he was occupying, and the principles of the system of law under which he was acting. Now, of that situation, indeed, my conception wants something of being determinate: but, of the system of law in question, my conception, is, so far as regards the present purpose, as determinate as I could desire it to be. This premised, it will, I hope, be sufficiently understood, that, in whatever I

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may find occasion to say of him, it is to the species only, and not to the individual, that it can have been intended to be applied. And so then, of this string of phrases is composed the ground, on which the gentleman expects us, our eyes shut all the while against the manifold matters of fact which the case furnishes us with, expects us to rest the unbounded confidence which, by the word *depend*, he calls upon us to repose: as if these words were not just as easy to write as an equal number of other words of the same length: as if acting were less common upon a bench than upon a stage: as if it were not just as easy for the most dishonest, as for the most honest man upon earth, to commit to paper, or to the air, phrases of this sort, in whatever quantity the purpose were thought to require: as if the most notoriously rapacious and sordid hypocrites this country knows, were not every day, not only pouring forth professions of virtue such as these, but confirming them with appeals to God, and ever-ready tears. In answer to this call, as one of the public, I will here take the liberty of stating to him my conception of the course which, under the invitation given him by those same "*inviolable laws*," I "*depend*" upon his having pursued. For the gratification of those same "*passions*" to the influence of which, for no other reason than that he has been at the trouble of saying so, he *desires* us to believe him to be so effectually superior, he has been employing these facilities which, for that same purpose, under the cover of that veil of impenetrable secrecy, which they have so religiously thrown over all judicial proceedings, those same laws have, in their bounty and their wisdom, been so careful to place in his hands. Proceeding then, according to established order, (for everything is as nothing in comparison with established order,) he has begun with taking an account of all such delinquents, whose power of hurting him is such as to exempt them from the necessity of coming to market for his services: in favour of these, the power, the unlimited and irresponsible power of pardon, which, by the wisdom of those same laws, has, by its not being nominal, been rendered but the more effectually real—has been exercised gratis. Another class, which he may, or he may not, have taken the trouble of forming, has been composed of those, towards whom he has found, in the sentiment of sympathy—in any shape, public or private—a motive, of sufficient strength to engage his exercising the godlike attribute upon the same disinterested and magnanimous terms. These two unprofitable classes being deducted, remained the class composed of all such other persons, in whose instance, upon due inquiry, a capacity of showing gratitude, in the pecuniary, or any other more refined, though not less valuable shape, has been found: and, in these instances, he would have been wanting in what was due to both parties, if he had not taken the requisite measures for improving the capacity into act. Uniting in his person, (if my inference from his official title be not erroneous,) the military character to the judicial, he would have been an offender against the laws of gallantry, had he neglected the opportunity afforded him by those same "*inviolable laws*," for applying beauty to its appropriate use. In civil cases, under the French edition of Rome-bred procedure, the goodness of a man's title depended, nominally, upon contracts or conveyances, really upon the beauty of a wife, sister, or daughter, in the eyes of the most influential Judge. It was manifestly for this, amongst other reasons, (for there could not have been a better,) that, under that system, personal solicitation was not only permitted but exacted.

When using the word "*depend*," I said—this is the sort of conduct that I should *depend* upon his having pursued, it was because, in the translation of the judicial document in question, *depend* was the word I saw before me. Here, lest I should be doing injustice as well to the gallant and learned gentleman as to myself, *depend*, it may be proper I should confess, would, in my view of the matter, be rather too strong a word for the case. Dependence on the part of the contemplating mind corresponds to certainty, on the part of the event contemplated: probability, though a greatly preponderant probability, is all that I see here. Such are the diversities in human character, that, when corrupt laws, the fruit of corruption, have done their utmost to lead men into temptation, this or that individual there will still be, in whose instance effectual resistance will have had place. But, utterly unacquainted as I am with everything belonging to the Gentleman in question, except his situation, and the system of law under which he has been acting, if I were obliged to lay a wager, I would lay at least twenty to one, not to say a hundred to one, that, with any such degree of inflexibility as that in which we have seen him professing resistance, he has not resisted.

To make anything like a complete statement of the grounds of this above-mentioned persuasion, would require a volume: it would require a complete exposure of the system of those same "*inviolable laws*." But, for the justification of such a persuasion, one single feature in that system is quite sufficient; and that is—the impenetrable *darkness* in which the whole procedure is enveloped. You have seen already the use and reason of this darkness. In *Spain*, a man must be more or less than man, if he does not put it to this use. For *Spain*, put *Portugal*, *Italy*, *Germany*: take any country where *Rome-bred* law reigns; the case will be little varied. Cases excepted too minute to be here worth mentioning, take this for an incontestible rule—*Where there is no publicity*: (I speak of judicatories,) *there is no justice*. Oppression, depredation, corruption—all this

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there is—everything rather than justice. Under Rome-bred law, in the pleadings of advocates, in here and there an instance perhaps, you will see publicity admitted. In pleadings, yes: but upon what ground? Upon no other ground than that which is formed by evidence, manufactured at pleasure under the veil of secrecy: the cause thus corrupted in its vitals, and in the judicatory, responsibility destroyed: destroyed—the thing itself, and thence the sense of it—by the *multitude* of the judges. From the stage, at which, by forming a sort of partial succedaneum, how inadequate soever, to an ungarbled public, the multiplicity of Judges might apply some restraint to corruption—from this stage it stands excluded: the stage at which it cannot be of any such use, *that* is the stage at which it is admitted. By the presence of almost any man, much more by the presence of one invested with equal authority, a Judge might, by the fear of divulgation, be deterred from any such palpable injustice, as the putting an ungrounded exclusion upon a witness, or suppressing or falsifying any part of his evidence. But when, after a decision already pronounced by one judicatory, a question comes in the way of *appeal* before another, and that other a many-seated one, nothing is there to hinder any one member of it from giving to his vote the direction, whatever it be, that corruption indicates. As to fear of *divulgation*, no place is there for any such thing. How should there be? there is nothing to *divulge*.

So far as concerns individuals all this being mere supposition, let us close with another supposition which, to every generous and feeling mind, will be a so much more acceptable one. The conduct of the functionary is now in perfect conformity with his professions: it is without spot. How irksome must it then not be to him, to be all along acting under a system, under which, while he is acting, he cannot, by any discerning mind, be regarded as otherwise than more or less corrupt!

A system, by which he is placed in so degrading a situation—how odious must it not be in his eyes? how anxious must he not be, to embrace with the utmost promptitude every the smallest chance for seeing substituted to this foul and technical system a pure and natural one? "Foul," I have said, *and* "technical." But, when applied to a system of judicial procedure, *foul* and *technical* will one day be universally understood to be synonymous terms: *technical* being said of it, *foul* will be put aside as superfluous.

As to the *screen* for *corruption*—the screen made out of the panegyric on *delay* and *forms*, I have seen it in use these five and fifty years: the name of the manufactory is visible on it. *Esprit des lois* the manufactory: *Montesquieu* and Co. the name of the firm: a more convenient or fashionable article was never made.

In Montesquieu, as in Blackstone, whosoever has misrule in any shape to attack or to defend, may find this and that and t'other thing, that, with more or less exactness of application may be seen or made to fit his purpose. If your wish is to put the business off, quote Montesquieu—you may put it off as long as you please: if your wish is that it shall come to nothing, there is Montesquieu who will do this for you likewise. In addition to increase of delay, vexation, and expense, the forms invented by the lawyer tribe have had everywhere for their object the enabling them to bring a suit to nothing whenever they are so disposed. What has been done is found to be unconformable to this or that same rule or form: to a rule or form already made, if there be an already made rule or form that is near enough to the purpose; if not, to a new form, which, on pretence of being found ready made, is made to suit the purpose. Behold here the key, to a part, perhaps the greatest part, of the absurdities, portentous as they are, which may be seen swarming in every system of procedure that was ever made. Made: to which must be added—or pretended to have been made, in so far as it is not exhibited in any other shape than that of *common*, alias *unwritten*, alias *imaginary*, alias sham and counterfeit law.

Montesquieu was a man of gallantry—a *bel esprit*—a fine gentleman, and a philosopher. But, before he was anything of all this, he was a lawyer: a lawyer, bred up in the corruptions of Rome-bred judicature: a French Judge with the rank of President, in one of those oppressive and predatory corporations called *Parliaments*; a name which, in all its senses, will one day be as universally a term of reproach as *the Inquisition* is already. With all his merits—and pre-eminent most unquestionably they were—it could not escape his sagacity, how intimate the connexion was between his rank in society, and the respect entertained for the abuses by which that rank was conferred.

A man, who has an abuse to defend, must for that purpose, were it only for decency's sake, have a something with which he may be supposed satisfied. As to the something *here* in question, if our Colonel Fiscal was more of a Fiscal than of a Colonel, it is no more than he himself may naturally have provided himself with, and kept for use: if he was more of a Colonel than of a Fiscal, some other person who was a fiscal without being a colonel, put it perhaps into his hands. It will continue to be needed and to be used, so long as any particle, either of the nuisance called *Roman common law*, or of the nuisance called *English common law*, remains unextirpated.

The disorder has been seen: it admits but of one remedy. The disorder has for its cause a system of procedure, produced in a dark age by interests and designs, directed to ends opposite, in the degree that has been seen, to the ends of justice. The remedy, if it ever has any, will be constituted by a system of proce-

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dure, produced in an enlightened age by interests and designs, directed from the first towards those only legitimate ends, and, from first to last, pursuing the same undeviating course. The difference between a work directed to the one, and a work directed to the other of these opposite objects, will, in and by such a work, have been rendered visible to all eyes. In the hands in which the power of the country is —in these hands, will be then the choice.

ADVERTISEMENT TO TRACT THE THIRD.

In the beginning of November 1820, not long after the time when the last of the four letters just published "*On the Liberty of the Press and Public Discussion*," was sent to Spain—the letter, now for the first time printed in the original, was sent by a mercantile friend of Mr Bentham's to a correspondent at Lisbon, to the intent that it might be there translated into Portuguese, and the translation published. Of that paper, whatever was the cause of the failure, no tidings could ever be obtained. When all prospect of its answering its purpose at Lisbon was at an end, another copy was at length sent in the same manner to Oporto, and had better fate. That at Oporto it found a translator, and the translator a printer; and that copies of it found their way to Lisbon, is out of doubt. Of that translation, indeed, no copy is yet known to have reached England. What is much more to its advantage, the work has, however, since then, received a translation, and that translation publication, from the masterly pen of Dr Rocha, in his monthly paper, intituled "O Portuguese:" in which the matter of it is applied and enforced by comments, as well as recommended by the warmest eulogiums.

Not long after the news arrived in London of the formation of the Portuguese Cortes at Lisbon, a packet, containing a copy of Mr Bentham's works, such of them as could be collected, was sent for that metropolis in the same manner. The design was—that communication should be made of the contents in such manner as should be found practicable, and judged most proper, to the newly constituted authorities:—it was equally unfortunate. The failure being at length ascertained, another such parcel was sent, and produced that sensation, of which a communication to Mr Bentham from the Cortes, a translation whereof is annexed in the form of an Appendix to this paper contains the expression. By him, nothing had been written on the occasion or on the subject either time, to any person either here or in Portugal.

1*st July*, 1821.

TRACT, No. III.

Letter to the Portuguese Nation, on antiquated Constitutions; on the Spanish Constitution considered as a whole, and on certain defects observable in it; in particular, the immutability-enacting, or infallibility-assuming, the non-re-eligibility-enacting, the sleep-compelling, and the bienniality-enacting clauses.

PORTUGUESE!

You hear me from England. You will have heard of me from Spain. Hear the voice of an unbought, an unexpectant friend. Hear a voice, which, for more than fifty years, has been labouring to qualify itself for addressing you as it does now.

1. First, as to Constitution. Take example by your friends in Naples. Do as they did. Adopt it as a mass: time admits not of picking and choosing. Exceptions, few in number, simple in conception, mighty in import, I will point out presently. In the scheme of representation, you see the basis. Take it for all in all, nothing as yet practicable can be so good for you. For them it is good; for you it will be still better: this you shall see. To find ready made a work already so suitable, is a blessing too great for expectation; an advantage beyond all price. Somewhat which I should otherwise have said, I am stopped from saying by an odd accident. With the exception of some details, which necessity excluded from Spain, it is exactly the same with the scheme which, without concert, I was planning exactly at the same time. Mine, ere you receive this, will be courting your acceptance. In both, you may see *universality*, *secrecy*, *equality*, and *annuality* or *bienniality* of suffrage; in mine, *annuality*; in the Spanish, *bienniality*, substituted to annuality by a local necessity—a necessity which you will see: and which, unless you make it so, is not yours. In mine, as in the English, *one* stage of election: In this Spanish, *four*. Oh monstrous complication! But perhaps it could not there be otherwise. I am sure it could not have been as mine is.

2. Now secondly as to Cortes. Look abroad or not, a Cortes you have of course. But, un-

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der the same name, lurks the difference between life and death. The question is between fresh and stale. The stale was bad, even when fresh: what then would it be now? The last you had was in 1640: 1640 is not 1820: these figures suffice for proof. The Cortes of 1640 is that which the late regency would have given you; it therefore suited their purpose; it therefore would have defeated yours: another short argument, yet of itself a sufficient one. Before that of 1640, had there been a thousand, in none of them would the interest of the *subject many* have been the first object of regard: in none of them any other than that of the *ruling one*, and that of the *sub-ruling few*. The one thing needful is that by which the interest of ruler is made the same with that of subject; of representative with that of constituent. This is what the Spanish constitution may be brought to do for you. This is what your old stale constitution never did, nor ever would be brought to do, for any body.

Exceptions I have prepared you for.

Exception 1. The *immutability*-enacting, *alias* the infallibility-assuming clause. This is what my respect for Spain makes me almost ashamed to name. Amendment—none for eight years to come, and nobody can say for how much longer! As well might it have been said, no amendment till the end of time. The longer the thing continued without change, the stronger would be the reasons against change: the longer would be the experience of the needlessness of change. Immutability in the work, assumes infallibility in the workman: infallibility, (for such was the hurry,) without so much as time for thought. I, who have been thinking of such matters for more than fifty years, would no more think of giving a twelvemonth's immutability to any such work of mine, than I would set myself up for that Being who is as immutable as infallible. Nor, though infallibility were conceded, would it reconcile the arrangement with sanity. Tying up all other hands, the legislator tied up his own in the same bonds. The infallible of today, will he not be at least as infallible tomorrow? Or would infallibility decrease as experience increased.

Alas! this is not the only instance in which what is most absurd upon the face of it may be made not only reasonable but necessary, by a reason which is not, because it cannot be, avowed. For this absurdity, glaring as it is, Spaniards (so they tell me) had a reason, and I fear too good an one. What was feared was a relapse. The resource was—to anchor the constitution at the highest mark at which the flux should carry it, and thus to guard against the reflux which the remnant of despotism could not but labour to produce. The anchor dropped, as often as any retrograde proposition shall be made, a short answer is now ready for it. "The constitution is unchangeable: you have sworn to it: this measure would change it."

Portuguese! thank heaven! this reason applies not to you. You are not cursed with the everlasting presence of an arch-enemy: an enemy who, if a man, is, in his situation, necessarily an implacable one.

2. Exception the second: the *non-re-eligibility* clause: Articles 108, 110, the clause which excludes from the next Cortes all the members of the first. Experience is the mother of wisdom, says a proverb which can hardly be peculiar to the English language. No, says the author of this arrangement: not Experience, but Inexperience. Either *that* is what he says, or *this*:—In a legislative assembly, wisdom is worse than useless.

Oh but (says somebody) men might, but for this, give, each of them, perpetuity to his power. Oh yes, so they might, and would: were it not for the power which you give to the people—that power of removing them—all and each of them—at the end of every two years: which two years, were it not for Ultramaria, would be but one year. What! is it then so sure a thing, that, under a free mode of election, should the majority of the representatives show themselves unfit, the majority of their constituents would re-elect them notwithstanding, and that such would be the ordinary result? If so, then not only is this system of representation radically a bad one, but so is every system of representation whatsoever.

Appropriate moral aptitude—appropriate intellectual aptitude—appropriate active talent—in these may be seen the three elements, of which, in this as in every other situation, the perfection of appropriate aptitude is composed. Which of these elements is it that, by this exclusion, it is intended to secure? As to appropriate *moral aptitude*—the inhibition does not merely *prefer* untried men to tried; it puts an inexorable exclusion upon whoever has been tried; either it prefers chance to certainty; or, to secure certainty, it excludes it. Apply this to *appropriate intellectual aptitude*, or (to use the word of parade) *wisdom*: here the absurdity is still more glaring. *Moral aptitude*, or if you please, *probity*, having more in it of a negative than a positive aspect, if, at the commencement of a man's career, it is entire, habit cannot, as to its principal part, make any addition to it. Not so *intellectual* aptitude. Especially with reference to a situation such as that in question, is it possible, decay of faculties apart, that at the end of the man's career, be it long or short, it should not be greater than at the commencement? And, in regard to *active talent*, the case is too nearly the same to need distinguishing.

If rawness is a security for aptitude, let not the public, in any part of the field of thought and action, be without the benefit of it. Apply it to the fine arts: apply it to the ordinary arts. When a history painter has practised painting for two years—(I should have said for eight months, for in the Spanish Cortes

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year, there are but four months)—inhibit him then from practising it any longer: at any rate, till an interval of two years has elapsed: and so in the case of the smith, the carpenter, and the weaver. Or is the perfection of appropriate aptitude so much more quickly as well as surely attained in legislator's work, than in smith's and carpenter's work?

Note now the application which this same *non-re-eligibility* clause makes of the power of punishment and rewards. When no delinquency is so much as imputed, it inflicts punishment without mercy. The utmost punishment which it is in the power of constituents to inflict on representatives in case of the most enormous and flagrant breach of trust, is—forbearing to re-elect them. This punishment the clause inflicts without discrimination upon the most guilty and the most meritorious: upon the most meritorious, upon no other ground than that of a possibility of their having been guilty, refusing to them the possibility of proving themselves not to have been guilty, in the eyes of their natural Judges; those Judges who, in each individual case, have before them all the means of judging which the case affords, while the legislator has not any.

True it is, that, after two years of destitution, the capacity of being re-elected revives. But this circumstance only gives complication to the case, without making any material change in the mass of argument, and without making any change in the practical conclusion.

Thus to neglect details and proportions, is among the effects and marks of rawness in the business of legislation. Against some experienced or apprehended evil, an expedient presents itself, as affording the promise of a remedy. Imagination, heated by self-love, swells it: it takes possession of the mind, fills up the cavity, and keeps the door fast shut against all counter-considerations.

In case of delinquency, deemed such by the competent judges, in case of delinquency, how pernicious and flagrant soever, it secures the delinquent against the natural punishment—the punishment flowing, without need of prosecution—flowing as it were of itself, out of the offence;—arising without any of that uncertainty, delay, vexation, and expense, which in a greater or less proportion is inseparable from judicial procedure: and which, in the system most eulogised is swelled by an enormous mass of all those evils artificially accumulated. This punishment consists in the suffering produced by the loss of the power so misused: a result, for the production of which nothing more is needed than a sort of negative operation, if so it may be called, in the situation to which the power stands attached.

On the other hand, at the same time, in case of good conduct, it excludes him from the correspondent and natural reward: in case of good conduct, how pre-eminently meritorious soever.

To obtain admission for such a regulation, something more must, of course, have been said. But I should be curious to see this something: and to see it confronted with what is above.

Let me recollect. A something more, I think, I have sometimes heard of. Of the annual recurrence of the capacity of being removed, the result (I have heard say) is the perpetuity of inaptitude. To its paradoxicality does this position seem to me indebted for whatever reception it may have obtained. When, from a mind to which a certain degree of sagacity is ascribed, a position wearing upon the face of it a hue of absurdity is seen to come, credit is apt to be given for some latent truth at the bottom of it. But, in this case, mark the logic. Of the supposed effect—namely, inaptitude in some shape or other—the existence is, in the first place, taken for granted. Taken for granted? But on what ground? For it, there is no evidence: against it, there is—there never can fail to be, a host of evidences—the opinions of all who, by concurring in the election, have given their attestation to the man's aptitude. Sitting in his closet, taking in hand this or that individual case, the author of the paradox takes representatives in the lump, without evidence, and without other ground than this theory of his, pronounces them unapt. And what representatives? All that have ever sitten, or can ever sit a second year, after having sitten a first: or, if these numbers be objected to, let him change them, till he comes to say—all who have sitten a fifty-first year after sitting a fiftieth. Individually taken, what does he know of them? next to nothing; perhaps nothing; while the electors know, each of them, of the representative he had voted for, as much as he pleases. But the electors, those too in their situation he pronounces unapt: unapt to form any judgment respecting the aptitude of their representatives. These electors—how many of them does he know—know in any such sort as to be qualified for pronouncing a judgment on *their* aptitude? not one perhaps in a hundred.

3. Exception the Third: the *sleep-compelling* clause. Articles 106, 107: duration of the time for business, three months of each year in course; one month more at the utmost; nor this, but at the instance of the king, or of two-thirds of the deputies: forced sleep, eight months or nine months. So much for actual *law*: now as to *reason* and *expediency*.

If there be one thing more impossible than another, surely it will be—the saying at any time of the year, upon any sure grounds, what time may be requisite and sufficient to the business: to the business that may, in the course of the remainder, happen to require to be done. If such must still be the case—in a year when everything has long been settled, how much more necessarily must it not be the case, at a time at which scarce anything has as yet been settled? If such be the case, where the business is familiar to the majority

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of the hands, how much more necessarily must it not be the case, when, as yet, whether by necessity, or, as above, by institution, there can be no hands to it, but new ones? If such be the case, in a nation which (like the French) is more apt to go beyond the proper pace than fall short of it, in how much greater a degree must it not be the case in a nation, which, if proverbs are not slanderers, is so much more apt to fall short of the mark, than to go beyond it? Under these circumstances, comes the Spanish legislator, and inhibits himself and his fellow-workmen from working more than three months out of the twelve in ordinary cases, more than four months at the utmost in the most extraordinary cases. Thus then it is, that the union of King and Cortes—the supreme power in the state, is doomed to impotence. To impotence, and by what? By a spell composed of half a dozen lines, for which, at any rate, not a grain of reason has been assigned or produced, whatever may have been found.

4. Example the Fourth; the *bienniality* clause.

Another amendment, my friends, you may perhaps see reason to make: though it shrinks into insignificance when brought into comparison with any one of the three former. This is, the substituting annuality of election to the Spanish bienniality. Of the bienniality, the cause is evident enough: it lies in *Ultramaria*. Had the duration given to the trust been no longer than one year, a quantity of time equal to the whole of the time allotted to the business they will be sent for, might have been consumed in voyages and journeys to and fro: as it is, scarcely more than half this proportion of time will perhaps be thus wasted.

Ultramaria being thus mentioned, let me congratulate you, my friends, on your being unencumbered with this nuisance. The King of the Brazils has already eased you of so much of it: of that part, in comparison with which all the rest is next to nothing. This remnant, I take for granted, you will sit still, and see him keep or take, without any attempt to hinder him. John the Sixth will not wage war with John the Sixth: the European King with his American self; the constitutional King, with the as yet non-constitutional King. You will look down with an eye of sympathy on your neighbours the Spaniards, who are still encumbered and drained by the sort of nuisance of which you are rid. Unite yourselves to those same neighbours by the closest bonds. I dare not speak the nature of them. You have the same interests: you have the same dangers: at the worst, forbear to add to those dangers by any disagreement between one half of the peninsula and the other half.

Note now, one in particular, of the bad effects of an immutability-enacting clause. Inhibiting *legal*, it necessitates and produces *anti-legal* changes. To amendment, it substitutes violation —violation of the law—and by whom? By the legislator himself: by him whose example is the highest and most impressive of all examples. If, in his breast, the propensity to violation finds no bar, how can it be expected it should in any inferior ones? Such, then, is the tendency, at least of an immutability-exacting clause, to plant anarchy, and to destroy confidence.

Now for an example. In article 108, "the deputies," it is said, "shall be renewed *entirely*, every two years." Lest this should not be precise enough, by article 110, the deputies cannot be elected "a second time without another deputation intervening;" that is, (adds the zeal of the English translator,) "a member is not eligible to two successive parliaments." Thus stands the law. How, under this law, stands the fact? Amongst its members, this second Cortes beholds in multitudes, and beholds with universal congratulation, those who had sitten in the last preceding Cortes. In the decree, by which the constitution was established, was any amendment made as to this clause? If yes, then was the immutability clause violated; if no, then was the non-re-eligibility clause violated.* Which of the two was the case, has not reached the ear of

JEREMY BENTHAM.

*** In the original edition there is an Appendix of documents relating to a "Communication from the Portuguese Cortes to Mr Bentham, respecting the Translation of the whole Collection of his works into Portuguese by order of the Government." These will be found already

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* On the subject of non-re-eligibility, the author will be found to have modified his views when he came to express them more definitively in the Constitutional Code.—See Book ii. Ch. vi. Sect. 25, (vol. ix. p. 172.) The grounds on which he chiefly founded his plan of exceptions to re-eligibility are, that a supply of competent and experienced persons may by means of it be kept in existence to afford the electors a free choice: and the arguments employed are not contradictory to those given above.—*Ed.*

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printed in "Codification proposal," vol. iv. pp. 573–4, Nos. 1, 2, and 3. The Appendix is followed by this addendum:—

In the *Traveller* of Tuesday, July 17, 1821, appeared, and from thence in other papers appeared, the following paragraph sent from the Post-Office as being a translation from a Portuguese paper:—

"Lisbon, June 29.—In the Sitting of the Cortes of the 26th, a letter from Mr Jeremy Bentham was read, and the President said, the Assembly could not but be highly gratified with the approbation given to their labours by the first political writer of Europe. It was ordered to be printed in Portuguese and English, not to lose the force and beauty of the expression."

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LETTERS

TO

COUNT TORENO,

ON

THE PROPOSED PENAL CODE,

DELIVERED IN BY

THE LEGISLATION COMMITTEE

OF

THE SPANISH CORTES,

APRIL 25TH, 1821.

WRITTEN, AT THE COUNT'S REQUEST,

BY JEREMY BENTHAM, ESQ.

FIRST PUBLISHED IN 1822.

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LETTERS TO THE CONDE DE TORENO.

ADVERTISEMENT.

THE history of the present publication is as follows:

At the writing of the ensuing Letter, in so far as a judgment, which it has more than once happened to me to hear pronounced, is correct, —the writer of it—the *Conde de Toreno*—one of the Deputies to the Spanish Cortes from the province of Asturias, of the 149 European Deputies the only one whose name is a titled name,—was one of the most influential men, not to say the most influential man, in all Spain.

On the 9th of August, 1821, without any antecedent intercourse, or previous expectation on my part, I had the honour of receiving it from him. It is in the following terms:—

PARIS, *le 6 Août* 1821.

Monsieur J. Bentham,

MONSIEUR,

Notre commun ami Mr Bowring veut bien se charger de vous faire passer le volume ci-joint, qui comprend le projet du Code pénal présenté par le Comité à la deliberation de Cortes, qui doit avoir lieu l'hiver prochain. Vous y verrez des choses bonnes, d'autres fort mauvaises. N'allez pas pourtant vous effrayer, Monsieur, des articles qui parlent sur la religion: celà ne passera pas: le tems des persecutions en Espagne n'existe plus, et, malgré toutes les lois, il y a dans le fait une tolerance très grande. Je soumets, Monsieur, à vos lumières et à la profondeur de votre esprit, et de vos connaissances, ce projet. Ayez la complaisance de me faire passer vos observations, d'ici aux derniers jours de Septembre, que je dois retourner en Espagne: je vous en serai extrêmement redevable: j'en profiterai dans la discussion. A qui pourrais-je en effet mieux m'adresser, qu'au constant defenseur de l'humanité, et au profond écrivain de tant d'ouvrages célèbres sur la legislation?

Soyez sûr, Monsieur, du plaisir, et même du devoir, que je me ferai, d'écouter vos conseils dans cette matière, et de l'empressement que je mettrai toujours de vous offrir l'hommage de mon admiration, et de ma profonde considération.*

LE COMTE DE TORENO.

On the 22d of that same month (August, 1821,) and not before, I received the work which it announces.

On the 11th of September 1821, the Count being still at Paris, I sent off in manuscript, directed to him at that capital, by the post, the first of these seven Letters. The succeeding ones were directed either to him at Paris, to the care of the Spanish Mission there, or to him at Madrid. The day, on which the last of them was sent off, was the second of November, 1821.

The reader, as he proceeds, can scarce fail to be more or less curious, to have some conception of the result produced by it, on the part of the two distinguished statesmen principally concerned:—*Comte Toreno*, at whose instance, the observations were made and communicated; and *Mr Calatrava*, Chairman of the Legislation Committee of Cortes, composed of five members, by whose names the work which is the subject of them stands authenticated.

To this curiosity, such imperfect satisfaction, as is in my power, is here afforded. Its principal aliment will be—a second Letter, of the 26th September, 1821, from the same illustrious hand. The reader will naturally enough ex-

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* TRANSLATION.

PARIS, *6th August*, 1821.

Mr J. Bentham,

SIR,

Our common friend Mr Bowring has the goodness to undertake to forward to you the accompanying volume, containing the project of the Penal Code, presented by the Committee for the deliberation of the Cortes, at its next winter's meeting. You will see in it some good things, others very bad. Do not however frighten yourself, Sir, about those articles which speak of religion: they will not pass: in Spain the time of persecutions is no longer in existence: and, spite of all laws, a very extensive toleration has place in fact. I submit this proposed Code, Sir, to the consideration of your enlightened mind. Do me the favour to convey to me your observations on it between this and the last days of September, at which time I shall be on my return to Spain. I shall be highly obliged by your so doing. I shall make my profit of them in the course of the discussion. An address of this sort—to whom could it be made with more propriety, than to the constant defender of the principles of humanity, to the profoundly thinking author of so many celebrated works on legislation?

Be assured, Sir, of the pleasure, and even of the sense of duty, with which I shall attend to your suggestions on this subject, and of the eagerness with which I shall embrace every occasion of offering to you the homage of my admiration and of my high consideration.

LE COMTE DE TORENO.

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pect to find it in this place. But as, at that time, the three first of these Letters of mine were on Count Toreno's table, any conception, which could be conveyed by that Letter of his to a person not acquainted with the contents of those same Letters to which his bears reference, would be altogether inadequate. For this reason,—this, together with all such further explanations as can be given, are referred to the conclusion of these Letters, and will be found under the head of *Supplemental Advertisement*. Suffice it in this place to mention, that, by that second letter of the Count's, his consent to that intention of publication, which the reader will find declared by me, is signified.

Note.—In Letter I. (p. 491,) the reader will see certain *positions*, mentioned as designed to accompany the offer of an all-comprehensive and rationalized Code; and to serve as heads to so many sections in that address. In the list of these positions, though substantially they remain the same, considerable changes in respect of order and expression have presented themselves: and the tenor of the offer is intended to undergo a correspondent change. In the four first, no change is proposed to be made. But to the seven succeeding ones, the eight which here follow are now intended to be substituted.

5. The greatest happiness of the greatest number requires—that, for the function exercised by the drawing of the original draught of such a Code, the competitors admitted be as many as, without reward at the public expense, can be obtained: and so for that of proposing alterations in such draught as shall have been adopted. Plan for obtaining competitors.

6. The greatest happiness of the greatest number requires—that, for the drawing of any such draught, no reward at the public expense be given.

7. The greatest happiness of the greatest number requires—that, every draught so given in be, from beginning to end, if possible, the work of a single hand.

8. The greatest happiness of the greatest number requires—that, such original draught being the work of a single hand, it be known to be so.

9. The greatest happiness of the greatest number requires—that, such original draught, being the work of a single hand, it be known whose the hand is.

10. The greatest happiness of the greatest number requires—that, for the drawing of the original draught, all foreigners be admitted into the competition: and that in so far as applicable,—unless it be in all particulars taken together decidedly inferior, the draught of a foreigner be employed in preference.

11. On the part of an *individual*, proposing himself as draughtsman for the original draught of a Code of laws, willingness or unwillingness to interweave in his draught a *rationale* as above, is the most conclusive preliminary test, and that an indispensable one, of appropriate aptitude in relation to it.

12. On the part of a *ruler*, willingness or unwillingness to see established an all-comprehensive Code, with its *rationale* as above, is among the most conclusive tests of appropriate aptitude, in relation to such his situation.

LETTER I.

Occasion.—Inadequate this Examination.—A pre-Established Standard wanting.—A Standard announced.—This Correspondence must be public—Why.

QUEEN'S SQUARE PLACE, WESTMINSTER,
Sept. 11, 1821.

SIR,—On the 9th last, I received, in due course, through the House of our friend, the letter with which you have been pleased to honour me. On the 22d last, and not before, I received the work which it announced ("Proyecto de Codigo Penal,") and to which it bears reference. So far as regards myself, that letter of yours will assuredly not be lost: nor yet to the world at large, so far as there is any truth in the supposition, that any beneficial effect in any shape will be produced by any thing that comes from my pen: for, among the testimonials which I may ere long have occasion to produce, it will shine with its due lustre.

When, in speaking of the effects producible by the treasures you have put in my hands, I have said thus much, I have, I fear, said little less than all which there is to be said; for, by any particular remarks which I could find occasion to make on the work in question, I see, I must confess, but very little probability of my being able to render any service worth your notice. No such remarks could present any chance of being of use, otherwise than by means of a reference made by them, expressly or tacitly, to some standard of right and wrong, considered as already established. Of no attempt towards the establishment of any such standard do I know, other than that which is contained in my own works: which standard I am about to endeavour at the completion of, and, should life last me a year or two longer, not altogether without hope of success. This standard I term the *Rationale* of the Code: and, in the Code which I am about to begin to draw up, the matter of it will be interwoven throughout with that of the several proposed arrange-

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ments, which it is employed to explain, justify, and show the grounds of. Here then, apt or unapt, will be a standard, by which, if it be thought worth while, the work in question may in any part be judged of: but, without it, were I to take the proposed Code in hand, with a view to the making remarks on particular parts of it, I should never know where or how either to begin or end.

By the whole tenor of your letter, as well as the declared and only possible object of it, I am not only authorized but compelled to believe, that the more extensive any communication made by me on the subject may be, the more acceptable it will be to you; for, the subject to which you are pleased to invite my attention is no less than the whole of the projected Penal Code, not merely this or that one of the particular arrangements contained in it. Now, then as to this matter, the case stands thus—Exactly what you express your wishes to see me do, it is not in my power to do, with any the least prospect of good effect: in process of time, however, I am not only willing and desirous, but actually endeavouring to do *that* and a great deal *more*. In the following *positions*, which form the *heads* or *titles* of so many *sections*, the sort of work I am alluding to is expressed more correctly as well as concisely than I could in any other way express it.

Positions, designed to accompany the *offer* of an all-comprehensive and rationalized Code. They form the *titles* of so many *sections*, the *matter* of which gives the proofs.

Section 1. In every political state, the greatest happiness of the greatest number requires, that it be provided with an *all-comprehensive* body of law.

2. The greatest happiness of the greatest number requires, that such body of law be throughout accompanied by its *rationale:* i. e. with an indication of the *reasons* on which the several arrangements contained in it are grounded, and by which they are elucidated and justified.

3. The greatest happiness of the greatest number requires, that these reasons be such throughout as shall show the *conduciveness* of those several arrangements to the all-comprehensive and only defensible *end* thus expressed.

4. The greatest happiness of the greatest number requires, that in this *rationale*, the several *reasons* or sets of reasons be *contiguously* attached, to the several arrangements to which they respectively apply.

* 5. The greatest happiness of the greatest number requires, that, of this all-comprehensive body of law, with its rationale, the whole ground-work or first draught be, if possible, the work of a *single* hand.

6. The greatest happiness of the greatest number requires, that, being the work of a single hand, the work in question be *known* to be so.

7. The greatest happiness of the greatest number requires, that the work in question being the work of a single hand, and known to be so, it be known *whose* that hand is.

8. The greatest happiness of the greatest number requires, that, aptitude in other respects not being inferior, the hand, of which the discourse in question is the work, be that of a *foreigner*, rather than that of a native.

9. The greatest happiness of the greatest number requires, that the work be, if possible, performed in the ordinary sense of the word *gratuitously:* in such sort, that no determinate *factitious* reward, in any shape, at the hand of any person, shall be either received or expected for it; but that, under that restriction, the number of rival works be the greatest obtainable.

10. On the part of any proposed *draughtsman*, *willingness*, or unwillingness to interweave in his draught a *rationale*, as above, is the most conclusive *test*, and that an indispensable one, of appropriate aptitude in relation to it.

11. On the part of a *ruler*, *willingness*, or unwillingness to see established an all-comprehensive Code with its *rationale*, as above, is among the most conclusive tests of appropriate aptitude, with reference to such *his* situation.

Of these positions the design is, to form the ground of an *offer* to compose the sort of work therein described; viz. the first draught of an *all-comprehensive and rationalized Code* for whatever nation or nations it may find able and willing to give acceptance to it. This paper is very nearly finished; and, when revised, endeavours will be used to get a copy or copies of it conveyed to Madrid. If in print, as I believe it must be, copies shall be endeavoured to be sent to you, in any number you may be pleased to command, and through any channel or channels you may be pleased to indicate. Copies will likewise be sent to *Portugal:* where, consistently with the disposition already manifested, acceptance can scarcely be refused. As to any other countries to which it may happen to them to be conveyed, the nature of the case renders any express mention of them unnecessary.

On this occasion, an idea I must beg of you to bear in mind is—that, in whatever I write with a view to Spanish law as above, the greatest happiness of the greatest number, as per articles 4 and 13 of the Constitution, is the object I have in view, and employ my labours, such as they are, in the endeavour to give increase to: and that accordingly, subordinate to that end must necessarily be, whatever I can do in compliance with the wishes of this or that individual, how exalted soever his situation and reputation may be.

Sometime ago, I received from Mr Antonio

* See above, p. 490, where in the advertisement of the first edition other positions are declared to be substituted for all after the 4th.—*Ed.*

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Arguelles the honour of an invitation similar to this of yours. It had, however a determinate and comparatively limited subject-matter, —the use proper to be made of the institution of a Jury. That gentleman had already received copies of all such of my works as I had been able to collect. He had even, without my knowledge, from the spontaneous and self-sacrificing generosity of a friend of mine, received duplicates of a considerable number of them. Not long after my receipt of his letter, a work of mine on a *part* of that subject, viz. *Special Juries*, a work, which, after having been printed, had for ten years been suppressed by the fears of a bookseller, was obtained of that bookseller by another, and published. The Spanish mission took charge of a copy for Mr Arguelles: no letter accompanied it. I have not heard whether it has been received. Taken up out of its proper order, anything that I could find to say on that or any other particular subject, without reference to the *tout-ensemble*, could not be anything like satisfactory to my own mind: it could not contain anything that I should choose to abide by. I have, however, at different times dictated to an amanuensis a few premature and undigested thoughts, which I may perhaps endeavour to forward to him: but whether in manuscript or print I cannot yet determine: at any rate, sooner or later, they are intended to appear *in print*.

On the occasion of an intercourse such as this, public virtue and the greatest happiness of the greatest number, stand exposed to a danger of which, Sir, you are perhaps not aware. The *functionary consulting* has points of his own to compass. For support, he looks out for this or that individual, whose reputation with reference to the subject is more or less established. He applies to him for his opinions—on the whole subject-matter, or on particular parts or points in it. The opinions come. What is the consequence? In so far as they suit his views, he makes use of them: in so far as the name of the author appears needful to give support to the opinions, mention is made of it: in so far as this is not the case, the matter is sunk or appears under another name.

A short supposition will serve to exemplify my conception of the effect. I say—Let the Code pass: but the duration given to it will be, I hope, but temporary. You say—Let the Code pass: even Bentham, after all he has said against it, says so. Supposing this your wish, what should hinder you? who could even blame you? All this you see is but *supposition:* but it will serve to convey to you my conception of the mischief in question, just as well as if it were *fact;* as in part indeed you will find it to be.

So much for the *functionary consulting*. Now as to the individual consulted. Flattered with the notice taken of him, he gives opinions, and to whatever extent suits his purposes. But whether for the sake of the public or not, at any rate for the sake of his own reputation, and the pleasure of seeing exercise given to his power, his wish is, to see effect given to the thoughts he communicates. In respect of these his wishes, he feels himself at the same time in a state of entire dependence on the individual by whom he has been consulted. To render his communications as acceptable as may be to this patron of his, is therefore an object he must not lose sight of. How is that to be done? By rendering his suggestions as favourable as may be to the patron's supposed wishes, that is, to his supposed particular interests and prepossessions. If no opinion contrary to his own is delivered in this view, at any rate he forbears to give any opinion which in his expectation would give offence. To what good end indeed should he? Nothing that the *functionary consulting* finds unpleasant to him. can the individual thus consulted entertain any reasonable expectation of seeing employed by him.

Here then is an individual, native or foreigner no matter, whose thoughts on the subject in question, on the supposition of his competence, the statesman in office is desirous of seeing. Is it for his own sake? His desire will be to see no more of them than what may suit his particular purposes, and these he will keep to himself, or make use of in such proportion and manner as may be best adapted to that purpose. Is it for the sake of the public? His desire will be to see the whole without limitation, to see it displayed to the best advantage, and to see the whole public in possession of it.

Proceeding upon the supposition, that my notions on the subject of Legislation have been fortunate enough to obtain a place in your regard, all, therefore that I can do consistently with the principles above submitted to you, all that I can do (I mean except the trifle which I shall mention presently, and which I cannot do but in the particular way which I shall also mention, and I have accordingly taken measures for it) is to beg your acceptance of a copy of three pamphlets, in which I have at different times used my endeavours, but as yet for the most part with very little success, to submit to the Spanish nation my ideas on several points of cardinal importance.

They are as follows:

1. The tract on the once proposed chamber of the privileged orders in the Cortes. (This stands *first* in one of those three pamphlets.) A translation, for which I was indebted to the pen of Mr Mora, was read, if I may believe the newspapers, in the Cortes: it was even fortunate enough to be followed by unequivocal tokens of approbation on the part of that august assembly, if I may believe the information received through various channels, public and private, unconfirmed as it is by any communication from the assembly itself.

2. Observations on Judge Advocate *Herm-*

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sa's panegyric on *Judicial delays*, &c. (It stands *second* in the above-mentioned pamphlet.) A copy was, with a view to publication, sent to Mr Mora, and in process of time, on presumption of its failure, another copy was sent by our friend to a friend of his at Cadix. I am not certain whether the receipt of the first copy has ever been acknowledged, and I am certain that no acknowledgment of the receipt of the second copy has been received here.

3. The letter to the Portuguese Nation, chiefly turning on some supposed imperfections in the Spanish Constitutional Code. (It stands 3rd and last in the above-mentioned pamphlet.) This found I know not what translator and publisher at Oporto: it would therefore be rather extraordinary, if some copies of the translation have not long before this found their way to Madrid.

4. The pamphlet on the *Liberty of the Press and Public Discussion*.* Of this, two copies, the second on the presumption of the failure of the first, were sent to Madrid, addressed also to Mr Mora, and in a letter written by that gentleman, (I believe it was during the time of his being in confinement,) he mentions his having gone about half way in a translation of it.

5. The remaining pamphlet of the three, intituled *Observations on the restrictive and prohibitory commercial system, especially with reference to the Decree of the Spanish Cortes of July* 1820,† was not, like the above-mentioned ones, sent to Spain, or anywhere else, in manuscript. At a time considerably posterior to the transmission of the latest of the above-mentioned tracts, by the spontaneous care of my friend Mr Bowring, whose name stands on the title page, it was committed in the first instance with additions from him, to the English press: and, if I am not much disappointed, a copy must ere now have reached your hands. (So likewise of the two others.) Of this, you will, ere long, I have reason to think, see a Spanish translation in print, if the Spanish press be open to it.

In addition to the above-mentioned little assemblages of my ideas, covering as they do but a small, howsoever important, portion of the field of penal legislation,—you have all along, through that language of which you are so perfect a master, had, in common with that part of the Spanish public which is acquainted with that language, access to those assemblages of my ideas, by which in a certain way the whole of that field is covered. In detail, it is true, not much: but in principle, in a manner more or less particular, indication of not much less than everything that comes within the field of the officially proposed Penal Code, is there given. If the opinion, expressed in terms so flattering to me, continues to be entertained, what I have just indicated will afford an ample stock of matter, by means of which that opinion may manifest itself in practice.

All this while, my wish is—to pay what obedience is in my power, to commands so honourable to me, and at the same time without exposing either of us to any such imputations as those above-described. For this purpose, should I on the present occasion find any use in submitting to you (principally, I must confess, with a view to my above-mentioned offer) a few scattered thoughts,—an effectual, and the only effectual course that the nature of the case admits of, and which I shall accordingly take, is—the giving to our correspondence whatever publicity it is susceptible of. In the liberty I thus venture to take, you will not, I am confident, see any cause of complaint on your part. On no anterior occasion, either in person or in writing, has any intercourse had place between us. In this letter of yours, no desire of secrecy is expressed: no reason for ascribing to you any such desire on my part do I see in it. On any future occasion, should it happen to me to receive the honour of any further communication from you, accompanied with an intimation, that in the whole or any part of it secrecy is desired, your commands to any such effect shall most punctually be observed.

On running over the remarks, which a few irregular dips into the document in question, made in the double view already mentioned, have already suggested, I find the aggregate quantity too bulky by a great deal to be forced into the compass of the present letter. With as much despatch as weak eyes, the labour of which, in the revision of the work of a copyist, is indispensable, will admit,—I propose, however, to transmit the substance of them in a series of future letters, of the respective contents of which some idea may, in how imperfect soever a manner, be conveyed by the following titles.—[Here follow the titles of the succeeding Letters.]

LETTER II.

On the Course taken by the Legislative Committee, to prevent, otherwise than by Punishment eo nomine, *the free Examination of their proposed Penal Code.*

SIR!—I continue. On the subject of the word *free*, as here applied, a word or two in explanation may have its use: misconception and ungrounded imputation of error may be obviated by it.

When, in speaking of action on the field of

* See vol. ii. p. 275. † See vol. iii. p. 85.

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government, use is made of the word *freedom*, —of *freedom* considered as designative of a possession capable of being infringed or *violated*—it is pretty generally understood, though perhaps not quite so generally as it were to be wished, that it is not merely by physical force, or fear, or sufferance of *evil* in this or that shape, but likewise by hope or receipt of *good*, that the *infringement* or violation of it is capable of being produced. It is in the case of *Election to Office*, that this extended acceptation seems to be most distinct and general: but, in regard to formation and manifestation of opinion, be the subject of consideration what it may, it will be found no less proper and needful. As evil is more easily producible, and capable of being carried to a higher pitch of intensity, than good, fear of evil, as applied to the purpose in question, is upon the whole the more efficient instrument of the two. But, though there are some cases in which the smoother instrument cannot be employed at all, and others in which both may be employed together, other cases again are not wanting, in which, while the rougher is altogether inapplicable, the smoother may be employed, and is continually employed, with perfect facility and sure effect. Examples may perhaps offer themselves, Sir, to your view before this letter closes.

I proceed: In my desire to give the utmost extent in my power, to whatever service my labours may be capable of rendering to my fellow-creatures,—neither the nation, nor the government of which you bear so distinguished a part, could fail to be included. To the endeavours, already directed by me to this particular effect, you are not altogether a stranger; nor yet, I believe, to the difficulties which hitherto these same endeavours have found in their way. Of these difficulties of course not the least effective has been, the aversion with which the foreign productions in question have but too unquestionably been regarded—regarded by that same Committee, on whose work you were pleased to call for my observations: and, to speak plainly, yet I hope not improperly, the consequence is—my fixed apprehension, and that a very serious one, that as far as depends upon the gentlemen in question, unless some change should take place in their sentiments, the Spanish mind will be rendered inaccessible to me.

The liberty of the press is a topic, on which (as above) I have already touched, in one of those recent tracts which I hope are, ere this, in your hands. But that little work was completed and printed before this authoritative work of the Spanish Legislation Committee was in mine. So paramount in my eyes is the importance of this liberty to good government—more so perhaps, supposing the separation possible, than even the form of government itself,—so intimate, at the same time, the connexion, between the liberty thus denominated, and whatever chance any work of mine may otherwise have, of becoming productive, in Spain, of any part of the effect aimed at by it,—that, on *this* occasion, in the course of my endeavours to obtain the access in question, I find myself unavoidably led to make some addition to what I have *there* said; and, what renders me the less scrupulous about troubling you on the subject, is —that thereby, to how small an extent soever, my remarks, as far as they go, will be so many testimonies of my desire and endeavour to pay obedience to the commands, with which, Sir, you have been pleased to honour me.

The subject-matter in question being a proposed Code of Law, sure, like every other human work, to have its imperfections, the consequence is,—that if any remarks on it come to be received as desired, only in so far as, to an extent more or less considerable, indication is given of its imperfections, can any such remarks be productive of any use. Of any such imperfections, simple indication is of some use, and, by an operation of this sort, some service is rendered. To propose a corresponding alteration, if, and in proportion as, the alteration is well adapted to the purpose, is to render an ulterior and still greater service. On the presumption of its contributing to the melioration of the subject-matter, alteration is in the language of English legislation, adopted into the French, termed *amendment*. Amendment is either omission, insertion, or, which is a compound of the two, substitution. If this be true, of this cast therefore, and this only,—of this disapprobative cast, and not of the approbative cast,—are the remarks which a workman, really solicitous for the ultimate goodness of his work, will be desirous of receiving, and use his endeavours to receive.

To the truth of the above position, one exception indeed there is: and to preserve the statement from the imputation of error or oversight, though the exception has no place in the present case, I will mention it. If so it be, that the work in question has been made the subject of delusive remarks, or insufficiently-grounded conclusions of the disapprobative cast, then so it is, that by counter remarks of an approbative tendency,—in a word, by remarks of a *justificative* cast with reference to the work, service may also be rendered.

Such then, and such alone, are the sort of remarks by the communication or receipt of which the greatest happiness of the greatest number can on the present occasion be promoted: receipt, namely, by the two descriptions of persons, to whom in their respective situations it belongs to judge: by the legislators, that, for the benefit of their constituents, they may themselves put the remarks to use: by their constituents, that they may judge how far their representatives have put to use the information furnished to them, and thence how

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far they have given themselves a title to a renewal of confidence.

Unfortunately, in the eyes of legislators themselves, in the eyes of public trustees in whatever situation, no remarks of any such disapprobative cast is it their interest to see received by their principals: no such remarks would it be altogether agreeable to them to receive themselves, even if (what can scarcely be) they were assured that the remarks so received would not ever find their way to any one of those same principals. As to what regards liberty of discussion, the truth is, (how should it be otherwise?) in every country (so is human nature constituted) what every man desires is, to see all other men in possession of the most perfect liberty of making public all such ideas, by the publication of which the accomplishment of his views and purposes would, in his view of the matter, be promoted; to see no man in possession of any such liberty as that of making public any such ideas, by the publication of which the accomplishment of his views and purposes would, in his view of the matter, be impeded. If it be of human beings that the population of Spain is composed, this account of the matter will be no less applicable to that country than to any other.

In every political state, without exception, it *has been* the practice of rulers to employ the power attached to their situation, in the endeavour to give effect to this desire in both its branches; in every political state but one, this is *still* their practice. You will not, I hope, Sir, insist on my speaking of Spain as being that *one*. In my pamphlet on the liberty of the press and public discussion, I have already pointed it out: the Anglo-American United States.

Correspondent to this desire is, in that same commanding situation, the regard entertained for all such useful truths in general as belong to the field of government. Ever anxious is this regard: but the expedient employed for securing access and acceptance to all such truths, at the hands of other men, is, in case of diversity of opinion, actual or possible, to prevent men from hearing anything about the matter from any other than one side. What that side is may without much difficulty be imagined.

As this one side is of course the side fixed upon by these same tenderly-solicitous and all-commanding functionaries, the partiality thus manifested might be productive of some danger, were it not for that conjunction of infallibility with impeccability, the belief of which it is their equally solicitous and all-comprehensive endeavour to inculcate into the minds of men in general; but of course more particularly into the minds of all those, whose happiness it is to live in subjection to their power.

Twenty years, if I misrecollect not, was the term during which it was at one time the determination of a National Assembly of France, that the Constitutional Code framed by them should continue exempt from all alteration at the hands of any set of men; and in particular of any set of men elected by their Constituents, in the same way as they themselves had been. Not quite so intense perhaps was the persuasion of their being in possession of the same useful pair of attributes, in the breasts of the authors of your already established Constitutional Code. Not greater than eight years was the term appointed for this purpose: this for a finite term; but, at the end of this finite quantity, came another, on the face of which a colour, not altogether unlike that of infinity, is visible. But of this I have spoken in one of those tracts of mine already mentioned.

It cannot, I think, appear questionable to you, Sir, that it is by these same universally prevalent dispositions, that, on the occasion in question, the conduct of the gentlemen of the Committee in question has, with no small degree of exactness, been regulated: regulated, in relation to two kindred objects, to the connexion between which your attention has been above invited, namely, the liberty of the press in general, and the faculty desired by me of submitting to the consideration of the whole body of the representatives of the Spanish nation a series of works, the first of them having the same subject-matter as that of the work laid before them by that same Committee. When brought home to individuals, the idea, which on the present occasion stands associated with it, is not a pleasant one: yet, for clearness, and that the state of the case may be immediately and distinctly seen, I must even ascribe to it its proper relative character, and call it a work coming in *competition* with theirs: a work which, with reference to theirs, is a *rival* work.

I shall first speak of the policy in question, as it may be seen applying itself to the more extensive and major object, the liberty of the press at large. I shall then take leave to request your more particular attention, for the bearing which it has upon the particular work in question—the proposed rival work: but even from the first, this minor object will unavoidably be ever and anon peeping out, and offering itself to view.

Good, operating in the way of reward, evil, operating in the way of punishment:—these I think have been already mentioned, as the instruments, and the two only instruments, by which, on an occasion such as that in question, for a purpose such as that in question, the minds in question could in any direct way be operated upon.

Applied to the purpose here in question, the matter of reward not only admits but requires some refinement in the mode of applying it. On the present occasion, the object which gave room for such an application was, the obtaining at the hands of the Cortes at large in the first instance, and ultimately and finally at the

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hands of their constituents, the people at large, acceptance for the proposed work.

Though not in name, nor in the shape of a determinate sum of money already deposited in a bag, the faculty of making application of the matter of reward, in its principal shapes, money, power, and reputation, could not, in the nature of things, fail to be virtually at the disposal of men in the situation in which the gentlemen in question were acting. Between the whole legislative body, of which they were and are such distinguished members; between this body on the one part, and the immediate and avowed givers of all the above-mentioned political good gifts, namely, the Monarch, &c., on the other, I need scarce remind you how intimate the connexion is, which cannot but have place.

Turning to Article 171, to the King, by his sole authority, I see it belongs (No. 16) to nominate and remove (if *separar* means *to remove*) the Ministers of State and Despatch, namely, the seven ministers, of whom (Art. 222) the Gobierno is composed; (No. 5) to fill up (if *proveer* means to *fill up*) all civil and military employments; (No. 8) to command the army and navy, and to appoint the commanders; (No. 19) to nominate ambassadors, ministers, and consuls; (No. 12) to order the application of the funds, appropriated to each branch of the public administration; (No. 7) to grant honours and distinctions of every class according to law; (No. 13) to pardon delinquents according to law. Now then, Sir, it being so completely in the power of the members of the Cortes to obtain for themselves, and their connexions, an undefined indeed but thence a boundless share in the aggregate mass of all these good things; and this, in the instance of each of them, without so much as a pretence of meritorious service in any individual shape, or of any probable expectation of any such service, must it not, if there be any difference, be matter of increased facility to them, to obtain for other persons, shares, in that same vast mass, by reference made to incontestably existing service! service rendered in such well defined as well as universally conspicuous shapes, as those which stand recorded in so many portions of written discourse, having for their subjects, matters so superior in extent and importance to those which form the ordinary subjects of official service!

The gentlemen in question may perhaps assure you, Sir, (and I should not wonder if they did,) that this notion of their having any such good things at command is my mistake: for that in articles 129, 130, the Constitution has, by express prohibition, taken care to preserve their virtue against temptation in every such shape; and that in article 202 of their own proposed Penal Code, by forfeiture, infamy and expulsion, it has been their care that *that* same article in the Constitutional Code shall not be a dead letter. A prohibition! Excuse me, Sir, speaking with respect, the mistake is not mine, but theirs. Not *prohibition*, but permission is the *effect* (and can I avoid adding *the object?*) of these same self-denying ordinances:—of the severe virtue, thus displayed by the constitution-makers of the first Cortes, and of the rigour with which the gentlemen in question have proposed to enforce it. True it is, that by article 129 no deputy, while such, can receive for himself any employment of the number of those which are conferred by the king! Alas! no: if he is unfortunate enough not to see any person whom he can trust to receive it for him, he must o'en wait for it till the unexpired part of the term of his deputyship, namely till from two days to not much less than two years, has elapsed. By the next article (130) if a *pension* or a lot of *factitious dignity* be the object of his wishes, he must even wait one year longer for the fulfilment of them. Moreover, what he is there declared incapable of receiving for himself, (*admitir, obtenir,*) he is by both articles taken together prohibited, and during the same length of time, from *soliciting* for another. *Solicit?* No, to be sure, no such thing ought he ever to do: it would be beneath his dignity. It is for the creatures of the Crown to *solicit*, and at his hands, the honour which a member of the legislative body would do to them by his acceptance. So much for the process of solicitation: a process, it must be acknowledged, ill suited to a person so exalted: accordingly the trouble and humiliation of it is saved to him, the benefit remains untouched and pure.

The severity thus displayed is indeed most exemplary: but the act in the prescription of which it expends itself, is an event that can never happen. What! can solicitation be necessary to a man, to produce the supposition that money, power, or factitious dignity, for himself or his connexion, are among the things he would like to have! Such, Sir, is the footing on which the prohibition (meaning always the *permission*) stands in the Constitutional Code. This is the footing on which, in the projected Penal Code, gentlemen found it placed; and on this same footing have they left it.

The faculty, which, under your constitution, the representatives of the people have, of making their bargains with the advisers of the Crown, and thereby, so it be in a number sufficient to compose a majority, employing the whole force of government, in the exercise of depredation, and of oppression in all its other shapes, at the expense of their constituents,—this disastrous faculty comes in here, it must be confessed, but as in a parenthesis. It is, however, that sort of parenthesis, which can scarcely, on any occasion, avoid obtruding itself: for, what is the occasion in which the state of things thus alluded to will not be exercising its irresistible influence! Yes, Sir, it is the necessary result of the existence of any race of irremoveable functionaries whatsoever, with a certain quan-

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tity of the objects of general desire at their disposal. The legislator who gives to any such race this power, gives the invitation. The people's representative, who is content to act as such, without using any endeavours to remove the power, out of the hands so situated and so filled, gives his acceptance; a tacit indeed, but not the less effectual acceptance. Whether, in your circumstances, anything better could have been done, is another question: meantime, be it ever so bad, that which is done, is not the less done.

On the part of the representatives of the people, during the first days of such a constitution, before things are come to a settlement, and persons are come to an understanding, fear or ambition may produce refractoriness. Little by little, however, if the constitution keeps upon its legs, by mutual interest a sort of agreement will be produced, and a sort of partnership concern, always at the expense of the people, established, and carried on: partnership, carried on, and, in some proportion or other, variable according as individual character varies,—division of the common stock of the objects of general desire continually made. Day by day, stock, and power of enlarging it, will receive increase: day by day, the purse of government will be replenished: day by day, the hands of government will be strengthened: strengthened by that course, which, death in hand, death for everything, gentlemen (I see) have already been exerting themselves with so much energy in marking out: an energy, some samples of which it will lie in my way, Sir, to submit to your consideration. Yes, Sir, a state of contest, and ill-humour, such as seems to have place at present, or a state of agreement such as that I have just been giving intimation of, and gentlemen with their code have thus been making preparation for—such, in every nation on whose shoulders an irremoveable chief, clothed with any such body of power as above, or anything approaching to it, is fastened,—such, Sir, is the only alternative.

Well, Sir, my parenthesis is at an end.

But (says somebody) this reward that you speak of, as being held out to annotators—in what shape is it that you see it held out? Sir, in no shape: in no shape, and thereby in all shapes: in all shapes, in which it may be regarded as being, either immediately or by the intervention of other hands, capable of being administered to such as shall use their endeavours to be thought to merit it. From no such quarter as that in question can be *invitation* given, but *reward*, of itself, places itself at the back of it. Seeing the invitation, you see the reward: seeing the reward, you see it in all the shapes, that imagination, warmed by hope, can give to it.

Now then as to the invitation itself. In the preface to this proposed Code, (see the preface, p. xii.,) you may see the invitation in question given. Invitation! and to what service? To the service that would be rendered by the composition of an entire work on the subject in question? of any work fashioned throughout by a single hand? Of the advantage attendant on this plan of operation you see, Sir, the exposition I have announced. Rival works indeed? On this, or any other occasion, have gentlemen given encouragement in any shape to rival works? Not they indeed. And why not? The answer is almost too obvious to bear mentioning. Suppose a rival work produced—a work to any amount, howsoever great, more eminently conducive than theirs to the end professed to be aimed at,—suppose this done, the work would not have been theirs, the praise would not have been theirs, the rewards, in whatsoever shape looked for, would not have been theirs,—at any rate would not have all of them been theirs. How then could any such idea as that of a rival work have been an endurable one?

Be this as it may, *this* was *not* the service called for. See then what *was* that service. It was the taking in hand the existing work, the only work which, so far as depended upon them, gentlemen would suffer to come into existence; the taking in hand this work, and the sending in remarks upon it. Remarks,—but of what description? Of that description, which alone could, with reference to the greatest happiness of the greatest number of your fellow-countrymen, Sir, be of any use? remarks, in a word, of the disapprobative cast already mentioned? remarks indicative of imperfection, with or without proposed amendments? Oh, no: such was not the sort of remarks wished for. To remarks of this cast no prohibitive bar, it is true, stands opposed. But to what purpose should any such bar have been opposed? what need of it could the nature of the case admit of? In what shape, by any man of common sense, could reward in any shape be expected from any such remarks? Yes, peradventure, from indication given of this or that little spot, or supposed spot, in the sun, just for the sake of showing what it might be in the power of the observer to discover in other luminaries, if it were made worth his while. Yes: a drop or two of gentle censure, but tempered with becoming diffidence and apology, sweetened by an ample infusion of panegyric, and atoned for by intimations of more unreserved obsequiousness on a more favourable opportunity.

Thus it is that, even supposing it were in the terms of it held out to all, a reward offered for such a service would, in the interpretation put upon it, be unavoidably narrowed: narrowed by the consideration of the situation from whence it came. The situation, as above described, considered,—descriptions of persons, more than one, may be named, from whom, how well soever qualified, the probability could not, in the eyes of the gentlemen in question, be great, that without special invitation any such remarks should come. Take, for an example of one of these classes, natives known to

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be not well affected to the recently introduced order of things: take for another example, foreigners: to them, unless the design had been to prevent remarks from being sent in by them, —to them should special invitations have been addressed. And why not? why not, even to the most hostile? From a hostile hand, out of a hundred remarks, suppose ninety-nine not only in their form hostile, but in their tendency mischievous: so long as there is one that is beneficial, to reject it for no better reason than that of its coming from a hostile quarter, is it consistent with common sense? because this or that man has laboured to hurt you, is that a reason why you should refuse to convey a benefit to those for whom you are in trust?

So much as to undoubted enemies. But from the foreigner, as such, nothing of hostility could have been apprehended. Knowing the prepossessions he would have to encounter, by what inducement, but the hope of rendering, or that of being thought to have rendered, useful service, could he have been led to impose upon himself the labour, necessary to the making trial, whether it would be permitted to him to render it?

Such, if I do not mistake the matter, being the course which a preferable regard for the greatest happiness of the greatest number of Spanish citizens, would, on the occasion in question, have caused to be taken in relation to foreigners, be pleased now, Sir, to observe the course actually taken.

Advertisements were proposed to be inserted, and doubtless were inserted, in the National Gazette:—advertisements inviting remarks from all hands, inviting them with the most eloquent energy imaginable.

Tercero says (page xx.) Que asimismo, por *anuncio en la gaceta*, se invite, *á todos los literatos y personas instruidas que de este modo quieran concurrir á una empresa tan recomendable y de tanto interes para toda la nacion, espandose que las Cortes apreciarán sobre manera el que lo ejecuten, y dén este testimonio de* PATRIOTISMO *y amor á la causa pública.*

At that very time, one hand was not unknown—one hand, from which, with well-grounded assurance, gentlemen might have expected—if not exactly the sort, much more than the sort, of service thus called for. The interval, and more than the interval, allowed for these communications, namely, between some day *previous* to the 21st of April, 1821, and the 1st of July, 1821, had passed away; and by that hand no intimation to any such effect had been received. Whatever information, now in the middle of September, the individual in question is possessed of, it is to yourself, Sir, that, viz. on the 22d of August, and not before, he became indebted for it. Was it that his name, or his works, were unknown to them? No, assuredly. For in the hearing of the gentlemen in question, one of those works had been read: with others he is not without reason for believing, that of old some of them had been familiar. Others again, and in no small number, had, to their knowledge, been presented to the illustrious body, of which they are such distinguished members; and, if he has not been egregiously misinformed, presented, and, with no very common tokens of approbation, accepted. Is it that the way to the scene of his labours,—is it that the way to his hermitage—was unknowable or unknown to them? Sir, (not to speak of private correspondence through the Spanish mission at the Court of London,) the Finance Minister of the day in his public capacity, the Minister of the Interior of the day in his private capacity, the whole Gobierno of the day, the whole septemvirate of Ministers, had found the way to it.

But no: not merely on that *one* foreigner,—no, but on all foreigners without exception, was the exclusion meant to be put: witness the word *patriotismo;* for, the Spanish being the nation in question, whatsoever were the service rendered by any foreign hand, whatsoever were the generous affection manifested by any such service, it is not any such word as patriotism that could be the name for it.

On this word *patriotismo* a not uninstructive comment is supplied, by the affront put, through the medium of the French papers, on one of the members of the French legislative assembly, and on the present which, doubtless in the presumption of a due regard on the part of the constituted authorities of Spain for the interest of their principles—he had ventured to make to the Cortes: little, of course, could that distinguished representative of the French people think, that for the good he was seeking to do to the Spanish nation, evil in that or any other shape would be the requital. This, of course, has for its ground the supposition of a participation, on the part of the gentlemen in question, in the affront so given: what truth there may be in it can scarcely be unknown to a person in your position, Sir, but is altogether unknown to me: only from what is known to me, namely that which is known to everybody, can any judgment of mine be formed. In that case, what there was of purposed affront out of the question, if any real injury was done, to what party or parties was it done? to the individual, by whom the information, whatever it was, was thus presented? No, but to the people, who see in the gentlemen in question their appointed agents and trustees. Is it not to them, Sir, that the injury, if any, was done? —an injury, the magnitude of which will be in the direct ratio of the relative usefulness of the information thus rejected.

Oh! but, Spanish wisdom! such is the transcendency of Spanish wisdom! by it all the assistance that could be had from the whole world besides, is rendered superfluous and useless! Thus it is that self-regard and self-sufficiency think to hide themselves under a cloak of patriotism. To every man's vanity a bribe is thus offered in the shape of a compliment;

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and such a compliment! And for this bribe it is, that he is called upon to give the reins to particular and sinister interest in the breast of these his agents, and to make sacrifice of whatever benefit, to an amount altogether boundless, might have been the result of the assistance it accepted: assistance given to inexperience by experience on a field of action, at once the most important and the most difficult that can be named.

True it is that, in a certain way, in speaking of what they have already done, mention is made by them, but in the most general terms imaginable, of their having taken cognizance of foreign Codes,—an alleged token of zeal, industry, magnanimity, and prudence, for which, by the very mention made of it, praise is claimed. As this was no more than what every eye would look to them for as a duty, no praise was to be had for the avoidance of it: on the contrary, it was only from the alleged performance of the task that anything in the way of praise could be expected.

But information in the field of legislation being the thing to be looked for, for what reason look for it in the works of men clothed in power,—in works, too, in and by which that very power has been exercised—for what reason look for it to such works, not only in preference to, but even to the exclusion of, the works of men not so distinguished? Supposing the greatest happiness of the greatest number of their constituents their end in view, there were two reasons, why to unofficial even the preference should have been given over all such official productions. In the very nature of the situation from which they have come, what is made manifest by all such official productions, is—that they were produced under the irresistible influence of a *sinister* interest: an interest separate from, and throughout the whole field of legislation, in numerous and important points, diametrically opposite to, that of the greatest number: in a word, a particular interest, to which, throughout the whole extent of such opposition, the universal interest would of course be sacrificed. In regard to the official productions, this was matter of certainty: it could not be otherwise: in regard to the unofficial productions, though, by the unavoidable exposure to the temptations held out by the ambition of having a place among the ruling few, the like result is in each man's case rendered but too probable, yet there was no such certainty as in the other case.

So much as to what depends upon *moral*, now as to what depends upon *intellectual*, aptitude.

From the situation of the unofficial publicist, something in the way of a *rationale* might be expected: expected, and even with full assurance. Why? Because on this would be his sole dependance for whatever influence he could hope to exercise. To the work of the official publicist in question,—if the writer whose writing, whatsoever might be the purport of it, was to have the force of law,—no such needless encumbrance had ever been seen attached. From that situation, prisons and gibbets, such as the gentlemen in question have prepared such abundant work for, they saw everywhere set up in the place of *reasons;* and by those irresistible instruments, the proverbially feeble one, as they saw but too plainly, has in all such works been, in the judgment of the workmen at least, rendered needless and superfluous.

Thus it is, that, in a kindred and congenial sinister interest, the sinister interest to the operation of which the gentlemen in question, in their situation, stood so inevitably exposed, found a natural ally: while the indiscriminating prejudice, which power, by whomsoever possessed, and how ill so ever exercised, has everywhere found means to establish in favour of itself and its own operations, gave its sanction to the expectation that, in works of that description, fit models and objects of imitation for their own work would be viewed: works of which, accordingly, in that character, I cannot but hope to find, Sir, that in your opinion but too much use has been made.

The truth is—who can deny it?—one exception alone excepted—as between the rulers of every nation and the rulers of every other, there exists a community of sinister interest, and correspondent sympathy. In particular, in the union of impeccability with infallibility, may be seen a pair of attributes, the belief in which is to all of them alike convenient: and in the assumption of which they accordingly fail not, any of them, to join, with equally plenary and unqualified self-satisfaction and assurance. True it is, that to be inferior in the conjunct scales of moral and intellectual virtue to those whose place is inferior to their own in the conjunct scales of power and opulence, is a condition entailed upon them by the unalterable nature of things: for in the direct and not in the inverse ratio of the need he has of voluntary good offices at the hands of his fellow-creatures, will be the strength of a man's solicitude and endeavours to stand high in their esteem, and to deserve well at their hands. But, the certificate to the contrary, which, with an unanimity that only within these few years has begun to experience any disturbance—this most convenient and comfortable certificate, which, under the same sinister influence, has been signed by almost all writers, from whose works men have derived that instruction by which mind is formed,—has as yet kept minds for the most part shut against a truth, which, when once received, will be found pregnant with all comprehensive practice.

Upon the sort of service in question, at the hands of foreigners, friendly or unfriendly, with what pretension to consistency, could an exclusion, in any shape, direct or thus indirect, be thus put? I mean always on any such supposition as that the greatest happiness of the

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greatest number of their constituents was the end in view. For, that they derived whatever service was in their eyes capable of being derived from foreign *Codes*, is what gentlemen themselves declare, (p. xii.,) and even give themselves credit for. By any such accidental circumstance as that of its having received the sanction of a government in a foreign country, is it in the nature of the case, that the utility of any arrangement with reference to Spain shall have received increase? And in that case, let the draughtsman have been who he may, was he anything more than one out of an indefinite number of his countrymen, from each of whom equally well-grounded expectation of the like service might with equal reason, not to speak of the superior reason above-mentioned, have been entertained? With perfect consistency, however, it must be acknowledged, might that be done which was done, on the supposition that it was their own particular interest, in preference to, and to the exclusion of that all-comprehensive interest that gentlemen had in view. For in the case of the Codes, the service, said in general terms to be profited by, being already rendered, was a service, the rendering of which it was not in their power to prevent coming into existence: and the individual by whom it had been rendered not being known, could not rob them of any part of the looked-for rewards in any shape: whereas in the case of any foreigner by whom an invitation given by them had been accepted, the individual by whom the service had been rendered would have possessed, and naturally speaking have exercised, the faculty of making himself known, and thereby have come in for his due share, whatever it might have been, of the reward: at any rate of the praise.

As to foreignership *at large*—foreignership in unofficial situations—this condition, which, by the gentlemen in question, has been taken for a cause of effective exclusion, is the very one which, in the paper above referred to, you may have observed me employing in the character of a ground for preference. The reason is—the comparative inaccessibility of that situation to all corruptive influence. After what has been said, I would rather hear you answer, than say myself, whether it was not by the consideration of this very inaccessibility among other circumstances, that the exclusion was determined.

But not only is the door thus shut by them against all information from foreigners and from opponent fellow-citizens, but with still more effective and inexorable rigour is it shut against the greater number of those individuals, how well soever affected, whose happiness it cannot but have been gentlemen's wish should be understood to have been their end in view. You see already, Sir, that it is of ultramarians that I speak: of such of those whose distance from the seat of legislation precluded them from the possibility of causing any information on the subject to be delivered in from them within the appointed time: that is to say, of all of them in the lump: those only excepted, to whom, in a number scarcely equal to that of Frenchmen, it may have happened during the interval to have had their residence within the Spanish part of the Peninsula. No political bar, it is true, here: nothing more than a physical bar. But the physical bar is as insuperable as those political bars which your legislature (pardon me, Sir) has been in so much haste to set up—I mean those which belong to the prohibitive and restrictive anti-commercial system—are feeble and inefficacious. Your thus excluded fellow-citizens, such of them as still remain to you,—what think you will they say to this? to a proceeding, in which, so far as regards them, even the common exterior forms have not been observed? If Spaniards are lovers of forms—and they have not unsparingly been spoken of as being rather too much so for their own interest—if Spaniards are lovers of forms, how will the matter be taken by these your distant kinsmen? Are they Spaniards? are they non-Spaniards? If Spaniards, what treatment is this that has been given to them? If non-Spaniards, where is your right to legislate over them? where is so much as your pretence!

When speaking of information from foreign hands, it is of themselves (p. xii.) that, of course, they speak, as the persons of all others to adopt whatsoever shall be "most analogous to the political state of the nation." Ah, Sir! should you ever see the remarks I have ventured to make, and the arrangements I have ventured to propose, with an equal view to the greatest happiness of Peninsular and Ultramarian Spaniards,* you will see perhaps "how much more analogous to the political state" of the greatest number, is the system proposed by one foreigner at least, than the one proposed by these so highly distinguished and selected Spanish citizens. Yes, Sir; with no eye other than an equal eye, could a person not exposed either to sinister influence or to interest-begotten prejudice, have considered the interests and claims of the two so unhappily conflicting parties: and in the unendurableness of all useful and impartial information on that subject, may not the aversion to receive any such service from any such hand, have had one at least of its causes?

Ah, Sir! it is not only from what it may be in men's power to do, but likewise from what it may be in their inclination to do, that, to have any chance of proving correct, our inferences must be deduced. And whatever be the meaning of the phrase "*analogo al estado politico de la nacion*—" whatsoever be the meaning of this so conveniently nebulous insinuation—think, Sir, if in all its parts your system of legislation were equally "*analogous to the pui-*

* See the Constitutional Code, in this collection. —*Ed.*

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tical state" of those Spaniards, who in greater number are inhabitants of Ultramarian Spain, as of those who in lesser numbers are inhabitants of Peninsular Spain, where would be the advantage that could possibly be derived by the lesser number from the dominion claimed by them over the greater? But this is among the parts of the field of thought and action, on which, that their view of them may be the clearer, men in your country, as in every other, are so unhappily confirmed in the habit of shutting their eyes: at any rate of striving, might and main, to keep shut the eyes of their fellow-citizens. O yes! if Ultramarian could as easily be shut as Peninsular eyes! then would all be peace and amity.

Such being the descriptions of persons against whom, with their remarks, the door is shut, a word as to those to whom it is left open. These are natives of the Peninsular Spain at large, and one particular class—the class of *lawyers*. (See p. xix.) To the invitation given to natives at large, apply those observations which need not be repeated.

As to lawyers, being already comprehended in that general description, to them no special invitation, no *second* invitation, could naturally have been given, but for some special purpose. What can have been that purpose?

If there be a class of men whose particular interest is in a state of diametrical and immoveable opposition to the best interests and greatest happiness of the greatest number, it is the class of lawyers: it is their interest that, in regard to every possession, for the security of which men look to law, uncertainty should be at the highest degree of the scale at which it can be, consistently with the sufficiency of the fund, from which the professional profit must be drawn: it is their interest that the expense, with its sources and accompaniments, the delays and vexations attached to the purchase of a man's claim for justice, be as abundant as possible, for the sake of the profit extractible out of the expense.

In this profession, the state of the mind—is it not, to a first view, that of a perfect indifference as between *right* and wrong, for the defence of either of which, as it may happen, a man is hired? to a nearer view, a predilection in favour of *wrong*, as being the most dependent and most profitable customer? The assassin so called, is the malefactor, who, for the hire he receives, risks his life; the lawyer is the malefactor, who, for the hire he receives, risks nothing: risks nothing; but, on the contrary, like the conqueror, obtains at the hands of the foolish and corrupted multitude applause and admiration, in the direct ratio of the quantity of human misery he has produced.

If there be a profession, by which a man is prepared for the perpetration of mischief, in a profitable, so it be an unpunishable shape, is it not the profession of the law? If there be a profession by which, by the power of continual practice and continually received remuneration, all regard for truth is completely eradicated—a profession, by which insincerity is by the same means, with correspondent effect, injected and fixed, is it not the profession of the law? If there be a profession, by which, by the same perpetually recurring operation, a man is more effectually prepared than by any other for the letting his faculties out to any person, for any purpose for which reward in apposite shape and adequate quantity is to be got—if there be a profession, by which, for even the most inconsiderable reward, a man is prepared, so it be without personal hazard to himself, at the instance of any one who is able and willing to give him that reward, to render to the greatest amount a sacrifice, of the greatest happiness of the greatest number,—is it not the profession of the law?

These considerations—all which stand on the surface of the case—these considerations, which so stare every man in the face, can they have been a secret to the gentlemen of whom I speak? Was it possible for them to doubt of the object and tendency of any remark, that, consistently with the nature of man, could come from such a source? Was it possible for them to be uninformed of the alliance between the particular and sinister interest of this class of men, and whatever particular and sinister interest their own situation exposed them to the action of?

I shall presently, Sir, have to request your notice, for a sort of auction which, in this preface of theirs, gentlemen have set up:—an auction, at which the lots on sale are composed of recommendations, to be given by them to the favour of the givers of good gifts, and the biddings are to be in expressions of praise bestowed upon this their own work; the first bidding, above which all others are to rise in a sort of indefinite height, having, as you will see, been made by themselves. Supposing the auction to find bidders, can there have been any doubt in gentlemen's minds, of the spirit with which biddings would come from the class of purchasers thus exclusively distinguished?

Not that the door ought to have been shut against lawyers, any more than against any less determined enemies of good government and good laws; only that it should not have been thrown open to them so much wider than to friends; in a word, than to all the world besides.

On an occasion such as this, in the force of public opinion, any man, even though a lawyer, would, if it were in his own single person that he came forward with his remarks, find some restraint: some restraint on the effusion of particular and sinister interest in one situation seeking to be admitted into partnership with particular and sinister interest in a situation more elevated and effective. Even of this restraint, on looking at the terms of the special invitation thus addressed to lawyers, it seems

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as if the removal were among their objects. Copies of the proposed Code are ordered by them to be *sent*—Sent whither? To the three sorts of bodies corporate thus denominated; namely, "Universities, Tribunals, and Colleges of Advocates." By whom, in such a case, might it most naturally have been expected, that the returns, if any, made to all this magnanimity, would be made? By whom? unless it be by the several bodies, to whom before all other persons, if not to the exclusion of all other persons, it was to be, and I cannot but conclude has been, made known. But by any body in the situation of this Committee,—from any of the bodies so addressed by it, what, consistently with the universal principles of human nature, as evidenced by universal practice, could be expected? what, unless in the accidental case of discord produced by particular interests, could be expected, but one uninterrupted chorus of ecstatic praise?

Will it be said, that by the words employed in the designation of these bodies, nothing more was meant than to make known the channels employed for conveying the great work to the cognizance of individuals, and that it was from the members in their individual capacity, and not from the bodies, (that is to say, not from some of the leading members, released by their union from all responsibility as towards public opinion,) that the remarks were looked for? But had this been the meaning, where could have been the difficulty of finding expression for it? Whether this could have been their meaning, you, Sir, from your situation, perhaps know; by us, at our distance, no conjecture can be made, but from such details respecting lengths of time, compared with lengths of work and space, as gentlemen themselves have been pleased to supply us with.

I say from lengths of time, &c. The twenty-first day of April is the day of the date attached. to their preliminary discourse: and thereupon come the authenticating signatures, latest day allowed for the sending in of remarks, the first of July then ensuing: interval, two months and nine days. The document, to which on that day these signatures were affixed—in what state on that same day was it? in the manuscript or in the printed state? If in the manuscript state, then to find the time left for distribution, receipt, and composition and transmission of remarks, will be to be deducted the time employed in the printing of the work: of a work containing in the preliminary discourse 20, in the body of the work 248, 4to pages. In either case, it is from "the secretary of this same committee," or "*through* the *medium* of the *Gobierno*," the septemvirate of Ministers, that the packets had to go: to go to the utmost bounds of your extensive country, not very advantageously distinguished for the goodness of its roads, or for the facility of its communications of any kind. Now suppose one of these packets arrived at the residence of the official person to whom it has been addressed: thereupon, whatever further distribution it can have has to wait his leisure, and the determination of the individuals, within whose reach the several copies shall be placed, will depend more or less upon his choice: upon his choice, either singly or in conjunction with the individuals, whoever they may be, in whom he sees his necessarily consultable colleagues.

Now, Sir, within any such space of time, taking it at its maximum, to this display of condescending magnanimity, what was the sort of return—the only sort of return—that could have been looked for? Indication given of particular imperfections, with or without indication of means of remedy, grounded on the separate consideration of the several articles? could any such instructive indication have been of the number of the communications that were expected, or of the communications that could have been made? No, surely. But if not, what others? The answer is sufficiently obvious. In the form of addresses, laudatory orations, conceived in the most general terms, and vieing with one another in intensity of admiration as above: of time for these, whenever inclination had place—for these in any number, there could be no want: for no remarks of the other cast, in a condition fit to make their appearance—for no remarks of any such unwelcome cast, even supposing inclination ever so alert, could there have been anything approaching to a sufficiency of time.

Thus it is that, independently of all these other securities, under the ingenuity thus displayed, the mere circumstance of time served to secure to whatever communications could be received, that laudatory character which, if any, it had been determined they should possess.

Praise was the one thing needful: praise was a thing gentlemen were determined to have. This I have been forced to say over and over again. But what I have not yet said, or, if I have, not yet shown, is—that for fear of accidents, some they were determined to have that should be of their own making. I have spoken of the auction, of the lots to be sold at it, and of the prices in expectation of which the lots were put up to sale: I have spoken of their being themselves the first bidders, and of their bidding as being the price at which each lot was put up. Be pleased now, Sir, to look at the terms of it.

"It will be worthy of being reckoned (says p. xix.) among the most celebrated Codes of cultivated Europe: it will merit the esteem of wise nations; it will merit the gratitude of the Spanish nation: it will merit the veneration of the present age; it will perpetuate the memory of the legislature of 1821 in all future generations." Now, what, Sir, is the work thus spoken of? What is it but that which has been the fruit of the united wisdom of the gentlemen themselves, who are pleased thus to speak of it?

True it is, that before it has been raised to

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this pitch in the scale of excellence, not to speak of the remarks sent in, in no time, as above, it will have had the benefit of such remarks and consequent amendments as shall have been made by the legislature at large: but the remarks and amendments made on it by the legislature, what will they have had for their groundwork? This same work of the gentlemen in question: this, and nothing else. Now what at the utmost can be the amount of any alterations, which, after anything like an adequate discussion, can by possibility be made within the quantity of employable time, so anxiously and effectually narrowed as it has been by the Constitutional Code? Time sufficient for adopting each several article by acclamation:—yes; even on the supposition that before the acclamation each article is not only to be read, but read well: for this operation the quantity of time left applicable to the business may be sufficient. But suppose anything that could be called a *discussion* to have place, long before the first title could have received any tolerably well-considered amendments, the whole quantity of time applicable to the business will have been consumed.

All this while, self-abasement there is—and that in no small quantity as well as intensity: magnification of the burthen, and of their inability to bear up under it: great reliance professed in the assistance looked for from without; looked for from the zeal, not only of colleagues and fellow-citizens, but of foreigners. Speaking of the heavy charge *(la pesada carga)* which they felt pressing on their shoulders, and of the debility of those same shoulders, *("que gravitaba sobre sus debiles hombros,")* they speak on the other hand of the alleviation which they promise themselves from the assistance of well-informed men of divers descriptions, concluding with *estrangeros*. But all this is in p. xi.: and page xix. is the page in which, this self-confidence having in the interval risen to the degree just mentioned, the desire of receiving assistance from strangers gives way to the anxiety for the exclusion of it.

The self-diffidence has the air of an introduction, employed to prepare the way for the self-confidence. The self-diffidence looks as if drawn from some treatise of rhetoric; the self-confidence as if drawn from some other source.

Such as you have been seeing, Sir, is gentlemen's persuasion of their own appropriate aptitude; thus transcendant and consummate is it in their own eyes! But, not to speak of their colleagues in the legislature, their constituents,—if eyes they have, what will it be in the eyes of their constituents? For the support of any such claim, not a particle of ground, as far as I can find, have they, any of them, in any shape, at any time, made anywhere. Right of succession? can *that* be their ground? Impossible: for you will see how energetically they have negatived it. If *that* were their ground,—at the very lowest point, if they themselves are to be believed, would their station be in the scale of aptitude. If to their judgment, if to their pointedly declared judgment, any confidence is due, down to the moment at which this function devolved upon them, never can there have been anything more consummate than the inaptitude, by which the productions of all who have gone before them in the same track have been characterized. Their constituents—what will they say to them? The assent of their constituents—will *that* be given to this judgment of condemnation, to a condemnation so severe, so universal, and at the same time so pregnant with practical inference? Well, suppose the assent given. The gentlemen themselves—what will they be the better for it? From this rule, sweeping as it is, the confidence with which they look for an exception in their own favour is indeed entire. But this confidence—on what ground does it stand? None, as I have already said;—none whatever have they made for it. Of their aptitude, of the existence of which in their imagination everybody stands persuaded—persuaded, as if it had been made manifest by the strongest evidence, what evidence have they to show? Have they so much as their own evidence? Not they indeed: not so much as their own evidence: unless an event altogether supernatural and miraculous be to be believed: believed upon the ground of this same evidence. True it is, that while page xix. was writing, their persuasion of their own aptitude was such as is there described. But, at the time when page xii. was writing,—what was it? This too you have seen: so that, if they are to be believed, the change from a state of self-lamenting debility to a state of exulting vigour, took place within the interval occupied by the composition of these seven pages.

It is from Spaniards, be pleased to observe,—from these same Spaniards, that, with a declared exception in favour of themselves, and one other which the rules of politeness could not fail to add in favour of the company present, and a presumable one in favour of the author of the Constitutional Code, this assertion comes, of a universal state of inaptitude, with reference to the work of legislation on the part of all Spaniards.

So much for these Spaniards. Now, as to this same point, what would naturally be the judgment of an impartial foreigner? As, down to this moment, according to their own conviction, men born and bred under Spanish government have been in so eminent a degree unskilful, the probability is, (he would say,) that even now, at this moment, they are not so consummately skilful, that assistance from abroad should be peremptorily rejected: rejected, under any such notion as that of its not affording so much as a chance of being of any use.

On their own assertion, as you have seen, rests the notion of their own aptitude: upon their own assertion, and that a self-contra-

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dicted one: for to no other proof have they so much as made reference. Of the inaptitude of their predecessors, their notion stands on somewhat better ground. In proof of this, they have given statements and references, of which I cannot resist the temptation, Sir, of presenting you with some specimens. Scarcely can language furnish expressions more energetically declarative of consummate worthlessness. The essence of the national legislative wisdom they found concentrated, they inform you, in a compilation—the work of the then impeccable and infallible, but now extinct Council of Castile: a mass composed (say they, p. xi.) of collections made with a view to the amendment of the law. Disgust is the sensation declared to have been produced by its contents: a parcel of rough drafts, loose remarks, incoherent and undigested pages: dissertations half religious, half political: extracts from various penal laws, with notes exhibiting coincidences and repugnances. Apparent destination of the whole, furnishing patchwork for insertion into a new edition of the statutes at large. (*Recopilacion.*) Plan, the old plan: "salutary innovation, none: convenient reform, none: sole object, preserving and giving support to the antiquated and vitious system: basis, the same: punishments, the same: with a vast heap of laws and titles unsuited to the present day."

Under the notion of reform, the best thing that had been thus proposed to be done was—the giving a new edition of the old system in the old spirit, and upon the old plan: of which old system they had already, in p. vi., spoken in terms in which every vitious quality a system of law is susceptible of, is spoken of as exemplified by it in the highest degree conceivable: incomprehensibility in the style, absurdity and iniquity in the regulations, atrocity in the punishments employed for giving effect to them; and so forth.

At the end of what is said of the above plan for the amendment of those same laws, (p. xii.)—that the spirit of them may be anticipated from the nature of the subjects, examples of those subjects are brought to view.

"Holy Trinity—Catholic faith—Jews, and their expulsion from the kingdom—Moors and Moriscos—heretics and persons excommunicated—diviners, sorcerers, and soothsayers—oaths and perjuries—sacrilege—money-lending and usury—eccentricities of the sexual appetites in respect of species and sex: these and others which" (they conclude with saying) "ought not to have any place or direct insertion in any good criminal Code."

Thereupon, Sir, comes a natural question:—what answer shall I give to it? The depravity, so unreservedly ascribed to the whole body of the law—to the whole of the law then and even still in existence—by what causes was it produced? Was it not by sinister interest? by interest-begotten prejudice? by authority-begotten prejudice? by inbred intellectual weakness, the fruit of bad education, in a country into which no good book, unless by stealth, could ever penetrate? of a mind-debilitating and mind-perverting system of education, and those habits of thinking and acting, that could not but have kept flowing from it throughout life? All these causes of inaptitude—is it in the nature of man, that, at any point of time whatever, the influence should all on the sudden cease? The explosion, by which some of the instruments of tyranny were driven from about the throne, and some of its victims cast into their places—this or any other political convulsion, is it in the nature of it to change with equal rapidity the whole texture of men's minds?

Gentlemen speak of new lights, (p. vii. ix. xix.:) even the King's Proclamation to the Ultramarians (April 27, 1820) speaks of new lights. It was by these new lights (or if not, by what else?) that this self-confidence, of which, Sir, you have been seeing such abundant testimony, was inspired. But, these new lights—from what sources were they derived? From Spanish sources? No: even by gentlemen themselves this supposition, you have seen, is energetically negatived. From what sources then? From what but foreign ones? Yet, that from these sources—from the only sources, from which the lights which form their sole dependance have ever come—any fresh lights should come, this is what they cannot endure the thoughts of.

Instead of eulogy, suppose melioration the thing desired,—what, in advertising for remarks, would have been the course taken? Would it have been any such close course? No, Sir: it would have been a course as open as the nature of the case could possibly have admitted. "Send in your remarks," (it would have been said,) "send in your remarks, whoever you are, they shall be printed: not only to our eyes shall they be presented, but to the eyes of all our constituents; of all our and your fellow-citizens; in a word, of all mankind; of all those beings, on whose condition, in respect of happiness, your remarks will exercise their influence: exercise it? Yes:—in proportion to the value possessed by them, in the first place in the eyes of the selected and official judges, in the next place in the eyes of all men sitting as judges in the tribunal of public opinion. Send in, each of you his work, without name or other token, by which, antecedently to the time for its being put to use, the judgment passed upon it might be perverted: porverted by good or ill-will as towards the person of the workman. Send it in without any such public notification: and be assured, that if, for drawing aside the impartiality-securing veil, any private intimation be conveyed,—the avenging eye of the public will be on him by whom the corruptive information is conveyed, and on him, whoever he be, on whom it is productive of the effect it aims at."

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P. S. I should be curious, Sir, to know, if the thing were possible, how many and what the communications are, that, in pursuance of the invitation to send in remarks on their draught, have been received by the legislative committee: received, antecedently to the appointed day, July the first, or at any time since: what received, and from what public bodies, and what individuals respectively sent in, and from what places: and, of those received, what have been printed and published for the information of constituents, beginning with the people of Madrid. It might to any one be matter of curiosity, to say no more, to see what sort of agreement there has been, between the facts and the inductions above hazarded in relation to them: hazarded by a man, whose eyes or ears no positive information whatever had ever reached.

LETTER III.

On the course taken for preventing, by means of Punishment, eo nomine, *all effectual Indication of Imperfections in the existing political System, the proposed Penal Code included.*

SIR!—The efficient power of the matter of reward is great, but its applicability is limited: it is limited by the limits which the nature of things has set to the quantity of the matter of good to which this destination can be given, and by the number of the persons to whom it is possible to flatter themselves with the hope of a share in it. In the present instance, their number falls short—very short—of the whole number, of those on whose part, for the attainment of the end, acquiescence at least has been regarded as necessary. To produce acquiescence at the hands of the vast majority, no instrument of less force and applicability than punishment was looked upon as sufficient.

Follow a few samples of the use made of it.

Of the acts marked out for punishment, one is—*that* which consists in the endeavour to make an *alteration* of any kind in the political constitution of the Spanish Monarchy. For this offence, the punishment appointed is death. The article, by which the anxiety to secure obsequiousness is thus expressed, is the very first in the whole Code: and, as in this, as in any other work, the commencement is that part to which the attention of the workman will naturally have been most closely applied, it may, at least without intentional injustice, be taken for a sort of sample of the whole. Whatsoever may have been the design,—here already, so far as regards effect and tendency, two intimately connected objects may be stated as being in a certain way provided for: namely, the securing *order* in the *legitimate* style, and the keeping at a distance two troublesome sets of men—impartial critics, and impertinent and presumptuous competitors.

Indication of alleged imperfections, indication of arrangements calculated to effect the removal of those same imperfections, indications of other Codes in and by which the removal or exclusion of those same imperfections has been effected—of indications of any one of these three sorts separately, at any rate of any two or of all three conjunctly, if the design be not to produce *alteration* in the system of which they are the subject, I know not what design they can have.

In the midst of all the care thus taken of the liberty of the press, an apprehension appears to have presented itself: an apprehension, of a certain overweening scrupulosity, to say no worse, on the part of this or that judge, the effect of which might be—to exempt the "*traitor*" (for such is the name given to the offender) from the lot so justly merited. For the tranquillizing, as it should seem, any such apprehension, (for in whatever I say in regard to any of the designs that seem to be indicated in and by this Code, I speak with unfeigned diffidence,) for greater security at any rate,—by article 213, provision is made of a more lenient visitation: six years' seclusion in a fortress. Nothing more than this, except that the situation of the fortress may be, and is to be, in one of the islands: the quantum of the suffering being accordingly susceptible of such undescribed and undescribable additions, as the case may be found to require, without any of those unsuitable alleviations, which the eye of so troublesome a public as the public of Madrid, might be disposed to look out for, if access were possible to it.

True it is that, to the sort of offence which seems to have been in view in both cases, the wording given in this latter case is (by article 213) not exactly the same as that given in the former case (by article 191.) In that former case, a characteristic word is *alterar*, to alter: in this latter case, *guardarse*, to be kept: but that, by this change in the language, any change is meant to be made in the idea conveyed, is more than I can see.

Not that, in this case any more than in the other, I can take upon me to say, but that, in the view taken of the matter by this or that person, in the situation of legislator, or in the situation of judge, a milder might eventually, in preference to the more efficient interpretation, be the proper one. But here comes in the misfortune, if not the policy: two periods are here in question: the period anterior, and the period posterior, to the sanctionment of the law. To the anterior period lest legislator, or constituents should be more or less alarmed, the milder interpretation is, without

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doubt or difficulty, the best suited. Comes the posterior period, and then, according as the decision falls to the lot of this or that judge, and according as the side, in support of which the obnoxious act has been done, is the wrong side or the right side, the interpretation put upon the words is the milder of the two, or the more efficient.

When confronted with some of the other articles, by which tongues and pens are endeavoured to be tied, this article 213, with the word *guardarse* in it, throws me into no small perplexity. By this article, every Spaniard, who, by word of mouth or in writing, shall endeavour to produce any such persuasion (*tratore de persuadir*) as that, in Spain or in any of her provinces, the political Constitution of the monarchy, in the whole or in part, ought not to be kept (*guardarse*,) is to be *chastised* (*castigado*) as a *subversor* of that same Constitution in the first degree, (whatever be meant by *the first degree*, for the explanation of which no reference do I see,) and suffer imprisonment for six years: which, if it be in the Peninsula that he has been condemned, is to be in some fortress in one of the adjacent islands, as above: not to speak of *et cœteras*. But, by article 191 as above, if a man do but *conspire* to *subvert* this same Constitution, (*trastornar*,) he is to suffer death: much more, surely, by parity of reason, must he, on the assumption made by that same article, (213,) namely, that he has actually been a subversor of it, which being admitted, he, whether the fact be so or not, is to be deemed and taken to have subverted it. Under the two articles taken together, what then is to be done with him? Under article 213, he is in the first place to be put to death,—put to death in the first degree, or put to death as if he had been (though he has not been) a subvertor of the Constitution in the first degree: whatever is meant by the first degree, which is more than I can take upon me to divine: and, when the breath is out of his body, then it is that he is to be shut up in the fortress, and so forth, as above.

Now, Sir, suppose prosecution under these two articles, one or both of them. Figure to yourself advocates pleading, and think what a widow's cruise of learned arguments! learned arguments upon the proper meaning of the two momentous words *trastornar* and *subvertir*, whence *subversor*: learned arguments, for the purpose of settling whether the two modes of action, thus differently designated, are different or the same.

But two articles after that, comes another, (Art. 215,) according to which every Spaniard, who, by word of mouth or by writing, propagates any other *maxim* or doctrine, which has a direct tendency to destroy or subvert (*destruir ó trastornar*) that same Constitution, is to suffer imprisonment: imprisonment, from two to six years, besides loss of employment, and so forth; but nothing is here said of fortresses or adjacent isles. As to *other*, it means (as it should seem, though this is not said) *other* than what is specified in the last preceding article (214.) More learning, poured forth upon the question; wherein consists the difference,—the difference between the endeavouring to persuade men that the Constitution OUGHT *not to be kept*, and the *propagating a maxim or doctrine tending to destroy or subvert that same Constitution*? Supposing a difference, the latter of the two offences seems, to a plain understanding, to have in it the larger dose of ill-will, and, if there be any mischief in the case, of mischief. For my own part, I have had the misfortune to conceive, and the temerity to declare in print, an opinion that in this same Constitution there is this and that article, that had better *not* be kept than *kept*: but, notwithstanding all the imperfections I think I see in this same Constitution, I set much too high a value on it to use my endeavours, or so much as to harbour a wish, to see any such fate as can be aptly expressed by the words destruction or subversion, befall any part that to me seems good in it.

Not more than three articles after this, comes article 218, which says, "Whatever person," (and this is not confined to Spaniards) "whatever person, by word of mouth or by writing, shall provoke any one to the non-observance of the Constitution, *with satires or invectives*," shall suffer—what? death, and then imprisonment, as above? Oh, no! in the course of half a page, all such severity seems already to have been forgotten. What he is to do now, is to pay a fine of from ten to fifty dollars (*duros*,) or else suffer arrest (*arresto*) for from fifteen days to four months; and, if he be a public functionary, the punishment is in both cases to be doubled.

To so plain a man as myself, the endeavouring to provoke men to a purposed *non-observance* (inobservancia) of the Constitution—under which words I should suppose that any open and avowed disobedience to this or that one of its ordinances would be regarded as comprehended,—seems to have rather more of mischief in it than the using a discourse, the object of which were simply to produce an opinion, that it ought not to be kept; under which words, it would seem to me that any discourse might be comprehended, having for its object to show that it would be for the advantage of the nation, that by the competent authority, this or that article in it should be repealed or altered. If so, I do not see, how, in any view commonly taken of the matter,—how it is, that by the employing on this occasion *satires* or *invectives*, (whatever be meant by *satires* or *invectives*, words loose enough to call forth learning in abundance,) how it is, that by the employing of poisoned weapons in either of these shapes, the malignity or the mischievousness of the offence, if it has any, should be diminished.

It seems to be by some principle, though from a principle which I am altogether incapable to reach so much as by conjecture, that

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e comparative encouragement thus given to *tires and invectives*, was prescribed. In rticle 327, compared with that which stands xt after it, I find another proof of the influ- ce of this same principle, whatever it be. y Article 327, the offence described is that him, who "by word of mouth shall excite provoke directly (*directamente*) to disobe- ence to the Government (*Gobierno*) or to any ublic authority." This is one branch of the fence: then comes a second, "or to resist or pede the execution of any law, or other act, those" (*acto de los:* quere, whether those *acts* those *persons?*) "expressed (*expresados*) in rticle 325." So much for the description of e offence. Thereupon comes the description the punishment: "reclusion or prison (*pri- on,*) for from six to eighteen months, if the citation or provocation has not taken effect: the opposite case, (so I understand *pero en te caso,*) from one year to four years."

Thus much for Article 327, in which nothing said of *satires or invectives*. Then comes rticle 328. Here the description of the of- ence agrees, as to part of it, with the descrip- ion given, in the last preceding article, of the rst branch of the offence created by it. He ho "by word of mouth or by writing" (as efore) "shall provoke" (the word *excite* is ow omitted) "with satires or invectives to dis- bedience to *any law*, or to the Gobierno, or other ublic authority." So much for the offence. Now for the punishment. Instead of *reclusion r prision* for from six to eighteen months, *rrest* for from fifteen days to two months t the utmost, with an alternative of a mulct f 180 dollars, with loss of employment, &c., f the offender be a public functionary, &c.; the ording and pointing being so ambiguous, as o leave it at the option of the judge to let off he offender with the fine, in case of his not eing a public functionary, &c.

Thus then you see, Sir, if, in the endeavours sed by him to provoke men to the disobe- ience in question, a man abstains from all sa- ires and invectives, he may suffer as much as ighteen months of reclusion or imprisonment, nor can he suffer less than six months; but if, on this same occasion, he indulges himself in *satires and invectives*, in this case his *arrest* cannot last longer than two months, and may be limited to fifteen days.

Note, that as to what is meant by the laws or other acts, said as above in Article 327, to be "expressed in Article 325," you are sent for it of course to Art. 325: when you have got there, you are sent to Article 290; and when you are at 290, you find yourself in a labyrinth, the clue to which I should scarce hope to be able to find, if my life depended on it; but at the end of it what I do find is four years of reclusion. Next to this article, and for the declared purpose of an explanation of it, comes Article 291: for the meaning of which you are further sent to four articles more, all in the lump, namely, 326, 341, 353, and 356: when you are at 353, you are sent to 346, and to 344; when you are at 346, you are sent to the whole cluster of articles contained in Title iii. of Part ii.; and to another cluster, contained in Chapter iii. of Title vi. of that same Part ii.

In the entanglement, produced by the indirect mode of designation above exemplified, may be seen a sort of instrument, of which, considered as applied to the field of legislation, the gentlemen in question, so far as recollection serves me, are the inventors. In some instances, the reference is in the simple form: from one article you are simply sent on to another: and here you suffer nothing worse than useless labour. But, in other instances, and these most unhappily numerous, words significative of *relation* are employed,—equally (*igualmente*), in the *same* manner. Whatsoever may be the decoration added by this contrivance, not small is the price paid for it: paid for it by the subject citizen, in the shape of serious inconvenience suffered. By it, is thus imposed upon the reader, the task of comparing the article which is clearly to the purpose, with another which may be to the purpose, or not, as it may happen; and in either case the task of establishing the fact of the identity of signification, or, in case of difference, the nature and extent of the difference: neither in the memory nor in the conception, can an article be lodged, without being coupled with another, or others, which do not belong to it. Thus, a burthen, which, taken at its *minimum*, is but too heavy, receives from this artificial contrivance an indefinite increase: and, as the result may, in each instance, be a degree of perplexity and uncertainty, to which no limits can be assigned, as little can any limits short of death be assigned to the mischief, to which, in case of an interpretation deemed erroneous by the judge, the citizen may be subjected: for, such may be the mischief, in a case in which death is the appointed punishment; which case, as above, is that provided for by Art. 191—the very first of the offence-creating articles in the Code. The citizen, when thus perplexed, if rich enough to take the chance for saving himself, repairs to a lawyer: which lawyer perhaps finds himself equally perplexed. But, for the suffering of the perplexed lawyer, compensation to his own satisfaction, is made: while by his unhappy client, in addition to his perplexity, comes, instead of compensation, the burthen of affording the compensation to the professional man, by whom the perplexity has or has not been decreased, and by whom security against the mischief has or has not been afforded. (*Asimismo*) as well (*tambien*) and so forth: and here, to the simple labour are added, not unfrequently, perplexity and uncertainty to an indefinite degree.

Such is the entanglement that has place, when there are but two articles thus unnecessarily and incommodiously connected; when, with the article with which you have to do, no

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more than one other with which you have nothing to do, is linked. What then must be the embarrassment, when, from the only one with which you have anything to do, you are sent on pain of not knowing what it means, to a second, with which you have nothing to do; from the second to a third; from the third to a cluster of others; from each of them perhaps to another or others! But, such is the frequency with which this mode of designation occurs in this same Code, that scarcely have I opened a page without finding instances of the employment given to it. Quite sufficient (one should have thought) are the difficulties inseparable from the subject, without its being clogged by any such useless and factitious instruments of uncertainty and embarrassment.

Having no example in anything that was ever written on the subject, nor any particular use that I can discover, this mode of expression presents itself to me as having something of a *colloquial* cast: as such, it operates in confirmation of the suspicion before intimated, that in the course of gentlemen's studies, the fascinating art of *rhetoric* has obtained rather too much of their attention, at the expense of the repulsive art of *logic*.

Thus much, by the by, for a specimen of the use made of *references*. But, of the proposed Code there are certain parts, which, it should seem, gentlemen make sure of finding lodged in the memory of every individual, who stands exposed to the temptation of committing an offence in any shape. Of these parts, one is—*that* in which an enumeration is made of the several modes of punishment. Being able to read, and having time sufficient to dip into some parts of this composition, though not to read so much as perhaps a twentieth part of it, my good fortune had conducted me to page 10, in which that enumeration is commenced. I was thus preserved from an error into which I might have fallen otherwise. Seeing how far this composition was from any steady observance of that indispensably useful instrument of certainty in a law, *ideis eisdem verba eadem, to the same ideas the same words*, the words *reclusion, prision, arresto*, might have passed upon me, as meant to be designative of the same punishment. Turning, however, to Art. 29, I found that *reclusion* is one sort of punishment, the scene of it being a house of *hard labour; prision*, another; the scene of it a *fortress:* both of them ranged under the head of *corporal punishments*. Looking for *arresto*, I found it, to my no small surprise, at a distance from the other two, and under the head of *punishments not corporal:* and in explanation of this word, it was that I found, but in words of the loosest texture, intimation given of some *further* punishments, which were to be considered as attached to all punishments ranged under the head of *corporal punishments*. For the conveying of this intimation, the words *civil effects* are the words employed; and for showing what is to be understood by these civil effects, no reference do I see.

In my Code, every word, the signification of which is not beyond all danger of dispute settled by universal usage, receives a definition: and all words so defined, stand distinguished by one and the same particular *type:* and thus, by means of an alphabetical index, all ambiguity and obscurity may be cleared up in the shortest space of time. In the Code is thus contained a Law Dictionary; that dictionary a complete one, and having the same authority as the text, with every word of which it has been confronted.

Sir, what you have seen hitherto, is no more than a part of what I was led to by Art. 191, being the very first of all the articles in which any description is given of particular offences. When I have done with this same proposed Code, scarcely perhaps shall I have read one-twentieth part of it. To what end should I! No use would there be in my reading it, any further than as I write about it: and if my determination was to go through with it, and say all that it occurred to me to say of it, my life would assuredly be at an end, before my comments were at an end. Sir, you have already had before you that one specimen: before I have done, you may perhaps have before you a few others. What if the whole work should be found to be of a piece with these specimens of it!

"*Oh! but this is not what we meant: we meant so and so.*" This is what I figure to myself gentlemen saying, should it happen to you, Sir, to present to their view this or that passage, in which it might happen to them to suspect that a change might be made, not altogether to its disadvantage. "Gentlemen, only from what the Code itself says, not from what, either in private or even in public, you may, any of you, be pleased to say, your meaning was while penning it,—only from what, in the eyes of everybody, the Code itself says, to the exclusion of whatever may have been said of it by this or that individual, can the meaning of it, in any part of it, be understood."

Sir, there is a very dry, dry indeed, but at the same time not unuseful branch of art and science, denominated *Logic:* upon it, where government is the field of operation,—upon it, as well as upon politics and morals,—hangs life and everything else that man holds dear to him. Upon it, depends the choice of words: of those words by which, according to the interpretation put upon them, man is destroyed or saved. If, in the instance of the gentlemen in question, this wearisome and unamusing art has been among the objects of their studies, the success of those studies has not, I fear, been quite so great as their constituents may, perhaps, see reason to wish it had been. Of all the several articles by which either particular delinquency is described, or particular punishment appointed, the very first (you see Sir,) is among those in which this laxity on

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the one part, so incompatible with security on the other, has been manifested. To inquire how far onwards a habit so unfortunate has extended its influence, belongs not to the present occasion, nor on any occasion, to any design of mine: to speak of it in the gross, in my view of the matter, it is a radical indisposition, having its root in the *method* which has been pursued, and not curable, but by another and very different one. Of this imperfection, if it be one, I may perhaps, have occasion, Sir, to submit to you, here and there, a few other indications.

Opposite stands a very brilliant and fascinating art, called *Rhetoric*, in which the preliminary discourse I have had such occasion to advert to, evidences no ordinary proficiency: if the time bestowed upon this instrument of fascination had been bestowed upon the instrument of sound instruction, the character of the proposed rule of action would naturally have been somewhat different, and as far as regards national peace, security, and contentment, would not (so it seems to me) have been the worse. If by Rhetoric men are sometimes saved from destruction, as well as sometimes consigned to it, it must be by logic, and in proportion as it is well applied, if they are secured against it.

In their preface, (page xii.,) Gentlemen state the manner in which the whole of their work was parcelled out amongst the five. If so it be that of that same work, the method is not altogether what might have been wished, of whatever imperfection there may be in it, one cause I am inclined to think might be found in this partition treaty. In the observations made in support of my Codification Offer, Section 7, (Draughtsman why single, &c.)* the disadvantages thought to be attached to every such plan of operation are brought to view.

Apropos of "doctrines or maxims."

What if the *doctrines or maxims*, call them which you please, "the direct tendency of which is to destroy or subvert the political constitution of the monarchy"—what, if these doctrines or maxims, for the propagation of which every Spanish propagator is by article 215, to suffer imprisonment from two to six years, with et cæteras, should be found in the Constitution itself? In such a case is the punishment to receive an inexorable application? By its doctrines being to be found in that place, does it the less come under the description here given of the offence? For an example of a thus destructive or subversive doctrine or maxim, take the doctrines or maxims by which, in articles 4 and 13, the greatest happiness of the greatest number is stated as being the only proper end of government. For an example of the tendency of such a doctrine to destroy or subvert the political constitution of the monarchy, namely, by putting the office of monarch out of it, take the following consideration. By a statement which I have before me, taken in the years 1787, 1788, from Spanish sources, the expense of maintaining that one functionary was about one-fourth part of that of the whole expenditure of government: that is to say, the ordinary, avowed, settled, and officially stated expense, over and above whatever was extraordinary and unavowed, though not the less constantly repeated. At present I should not expect to find it quite so much: but, be it what it may, an inference presents itself, as one, the conclusiveness of which would not be materially varied by any denomination, which that portion of the public expenditure has experienced, or seems to be in any likelihood of experiencing. The giving any such application to any part of the public expense, how (may it not be asked?) is it conducive to the greatest happiness of the greatest number? Especially when the whole income is not sufficient for the effective protection of the people against the neighbouring pirates, not to speak of the insurgent privateers; or, of the expense of defending almost all Ultramaria against its inhabitants.

Of the office thus endowed, what is the specific beneficial effect produced in any shape? What effect more obvious or more indubitable, than the giving establishment to a set of men, who, partly by legal power, partly by force, partly by corruption, have it so completely in their power to weaken, and in time to destroy, the *constitutive* power given to the people?—to destroy it? Yes: and through the medium of the share possessed in the *operative* power by their representatives. Two authorities does this projected Code exhibit—two conflicting authorities, who the one of them with one portion of it in hand, the other with that which is next to it, will, if it be but sanctioned and carried into execution, be waging a war of extermination, till the one or the other of them is exterminated.

In the political constitution of the Anglo-American United States there is no such office: and, for this omission, in what respect is anybody the worse?

Of the arrangements thus proposed, for putting to death all persons, by whom any conjunct endeavours shall have been employed for remedying any imperfections in the Constitution, what was the object? To preserve the liberty of the nation, if the gentlemen in question are to be believed. Contrary to the liberty of the nation, according to them, is any such endeavour: for, at the very head of the offences against the liberty of the nation, do I see it placed—Tit. 1. Cap. 1. "Capitulo Primero. De los delitos contra la libertad de la nacion."

As to this word *liberty*, it is a word, the import of which is of so loose a texture, that, in studied discourses on political subjects, I am not (I must confess) very fond of employing it, or of seeing it employed: *security* is a word, in which, in most cases, I find an advantageous substitute for it: *security* against misdeeds by individuals at large: *security* against misdeeds by public functionaries: *security*

* See vol. iv. p. 554.

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against misdeeds by foreign adversaries—as the case may be. In the present instance, if, by the word *liberty*, as thus employed, *security* in any shape—security against persons of any description, considered in the character of public functionaries, or persons acting under the orders, or in support, of public functionaries—was intended and meant to be afforded, —it must have been *security* not only for individuals, but for a certain class of public functionaries, against enterprises on the part of another class of public functionaries. Be it *security*, be it *liberty*, that was the blessing here in view, I should not, I must confess, have supposed, that anything in favour of it had been intended to be done, by any such arrangement, as that to which I have had occasion, Sir, to request your attention, had it not been for the assurance given in this same title.

Seeing the course taken by Gentlemen in their endeavours to preserve the "*liberty of the nation*," I could not but be alarmed, when I found, that—not content with preserving in *their* way the liberty of the *nation*, they had taken up the determination to preserve in the same way the liberty of the *press*. I should have said, indeed, the preservation of that liberty against abuse. Still, however, it is the liberty of the press that, in a section of the Code exclusively allotted to the purpose, I see taken in hand. "Titulo noveno. De los delitos y culpas de los impresores, libreros y otras personas en el abuso de la libertad de imprenta. Cap. único: Art. 172." Such being the hands into which I saw this instrument of liberty taken—taken by means of a body of arrangements separated and distinguished from all others by a title of its own, I could not but tremble for the fate of it.

Nor, after a glance at the contents, has my anxiety been removed. Sir, I know of one *individual*, of whose desire to see the press in possession of all that liberty which is conducive to the greatest happiness of the greatest number, and of no more than all that liberty, I cannot entertain a doubt: it is your humble servant. In no Code drawn by him will there be any such title. I know even of a *government*, of whose desire to see the press in possession of all that liberty which is conducive to the greatest happiness of the greatest number, and of no more than all that liberty, I cannot entertain a doubt. It is the government of the Anglo-American United States: Sir, in their Code, there is no such title.

For the state of the law in that seat of ever undisturbed internal peace, concord, tranquillity and amity, I must e'en beg leave once more to refer you to that one of my pamphlets, which has for its subject the Liberty of the Press and Public Discussion. Under that government, from the 14th of July, 1798, to the 3d of March, 1801, there existed a law having much the same objects as Titles i. and iii. and ix. of the proposed Code. Viewing the whole of it together, and comparing it with the matter of those titles taken together—viewing both in the lump (for of any such task as that of analyzing either of them there would be no end) its utmost rigour (you will see) was tender mercy. Being, however, the whole of it, plainly useless, and much worse than useless,—creative of a disease, which otherwise would not have had existence,—having but one good thing belonging to it, which was its temporariness as above,—it was suffered to expire: the authors of it, at that time the leaders of one of the two then contending parties, lost thereby the public confidence, and with it their political influence. That party (the aristocratical) having expired,—ask there for *parties*, no such thing will you find.

In every Code, in which I see any such title as *the liberty of the press*, I look of course for the destruction of it. I look to the committee's Code, and I have not been disappointed. In no one of all the Anglo-American United States is any desire more universal, or more intense, than that of seeing this liberty preserved. Accordingly in no one of the Codes is there any such title. What I shall have to say on the subject comes in of course, and no otherwise than in an incidental way, under the head of *offences against reputation*. To offences of this class, where the individuals injured are public functionaries considered as such, my Code, so far from regarding the circumstance as a cause of aggravation, gives some indulgence. The indulgence has for its ground the great importance it is of, that no misdeeds of men in that situation should remain unknown, and the more than ordinary facility, which, in case of the groundlessness of the imputation, they have for defending themselves: for defending themselves, or rather of being defended by others, without having the trouble to defend themselves. See my accompanying tract on the liberty of the press. But this indulgence I confine to the case of *temerity*: for, in the case where the falsehood disseminated by the disseminator himself is known to be a falsehood, though in this case disproof and refutation are so much more easy to men in power than to men not in power, still I see no need, nor therefore any warrant, for manifesting indulgence to immorality in a shape so mischievous. A distinction which on this occasion I am careful to make, is *that* between *defamation* and *vituperation*: defamation, the imputing to the person in question, the having done this or that specific act of a punishable or disreputable nature; vituperation, the mere expression of dislike to the individual, in terms of a reproachful and offensive nature. Of these, in proportion as they are understood to be unmerited, the punishment naturally attached, falls of itself on the head of the offender, and with small, if any, assistance from factitious punishment, suffices for the purpose. In case of defamation, the law of England (it is that part of the law which is made by judges and reporters of their decisions) disallows the proof of the truth of the imputation in the

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acter of a cause of exemption from punish- : for the law made by these creatures dependants of the Monarch, has for one of ffects (it is needless to add its objects) the iding a screen for delinquency in every e, on the part of themselves, and of their ciates in the system of misrule. Bad as as in principle, even the exploded Anglo- erican law just mentioned gives express wance to this proof.

* A rule which has been established by yers in England, and which I should expect ind adopted by the fraternity in the United tes, prohibits indeed, in case of defamation, interrogation of the party defamed, for the pose of proving the truth of the fact im- ed to him: and prohibits it,—not only in a l suit in which he is the avowed plaintiff, also in a criminal suit, which, while it has king for the nominal, has the individual the real, plaintiff. My Code allows it in st cases, and in particular where the party famed is a public functionary, defamed as h. In one of the two above-mentioned cases, prohibition has its foundation in an ill-ex- essed Latin rule, made nobody knows when, nobody knows who, namely, *Nemo tenetur ipsum accusare:* as if *confession* were *accu- tion.* In proportion as laws are tyrannical, is contrivance for giving impunity to delin- ents is beneficial: nor could I think of ex- nging it out of any such system of law as in ngland we have, or from any such as if the rce of law is given to this proposed Code, pain will have: suppose the laws not tyran- ical, the rule, and the imaginary law made ut of it, is purely mischievous: on better round, in tenderness to the accused defen- ant, would all other testimony be excluded: or who is so little likely to give false testi- ony to a man's disadvantage as the man him- elf is? But, in such a government as we have, nd Spain seems in danger of having, in a word n a government which has for its object the acrifice of the many to the few, the best thing hat can happen is—that all offences that are uch merely against government, should go npunished, and be followed by their designed effect. Of this portentously absurd rule, those, according to whom the greatest happiness of the greatest number is the only proper end of government, lay fast hold, for the sake of the application made of it to offences against go- vernment:—to offences against those laws which, having for their end in view the sacri- fice of the happiness of the greatest number to the separate interest of the ruling few by whom they were made, would of course, if carried into anything like full effect, render the greatest number miserable. Lovers of the people cherish the absurd rule, for the sake of this particular application which cannot be re- fused to it. Lawyers cherish it, for the sake of the protection and encouragement it gives to delinquency in all shapes, giving propor- tionable increase to the number of their cus- tomers. For this reason, in every country, it is the interest of lawyers to see depravity con- summate: accordingly in every country, it is, to the utmost of their power, their endeavour to keep or render it so.]

This collection of arrangements, in which such special care is taken of the press—such anxiety manifested for preserving its liberty from abuse,—this collection of arrangements —stands exhibited in 12 articles, namely, those from 592 to 604 inclusive; and occupies 4 out of the 240 pages of the Code. I have glanced over it. The result is—a confirmation of the conception above brought to view: namely, that, at any rate on the 21st of April, 1821, *that* being the declared day of signature, the wish and endeavour of the gentlemen in ques- tion was, at the prices there expressed in the shape of capital and other punishments, to prevent as far as possible the diffusion of all ideas whatsoever, that should, in any degree, be productive of sensations of an unpleasant nature in their own minds, or in the minds of any person in connexion with them: trusting, as they would naturally do, that by the same interests, prepossessions and affections,—their successors, whosoever they were, would, by so universally convenient an arrangement as this of theirs, be fixed in those same wishes and endeavours: that, in this view, their endeavour was—to keep the eyes of their fellow-citizens for ever hermetically sealed, against all writ- ten or printed discourses, the tendency of which should be to produce any such unpleasant ef- fect: and that it is in this same view that, by article 602, they have extended the exclusion to discourses, in the Spanish language, printed else- where than in Spain, and by articles 598 and 601, to discourses of the like tendency in any language other than the Spanish, wheresoever printed.

If there be any one foreigner who, more than any other, not to say more than all others put together, has been the object of their jea- lousy, who can it be, Sir, but your unfortunate humble servant? And if such were their wishes in relation to him even from the first, what will they be, should ever any such provocation meet their eyes, as cannot but be afforded by so unwelcome a proof as this is which is now given in obedience to your commands?

For the purpose of keeping matter such as the above from the eyes of constituents, what then is the punishment which the proposed Code provides? Sir, you have seen already—the punishment of death. From this punishment, fortunately for him, true it is that, by remote- ness from your country, the *person* of your above-mentioned humble servant is kept safe. But, by the terror of that same punishment, any the most useful of communications which in his eyes it would be worth his while to make, are not the less effectually excluded.

On this occasion permit me, Sir, to recall to

* In the original letter, this passage which is in brackets, was omitted.

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your view that same leading article (article 191) in which death is the punishment, appointed for every person by whom endeavours shall have been used to bring about any *alteration* in the political constitution of the Spanish Monarchy. In speaking of that article, one word, nor that an altogether immaterial one, I must acknowledge the having omitted the mention of. This is the word *conspirare*—to conspire. The omission had not for its cause either oversight or any deceptious design: or in short any other cause than the convenience there is in speaking of no more than one thing at a time. No such effect had it (no such effect had the omission I mean) as that of narrowing or otherwise varying the description of the offence, unless, in the breast of a man who is not insane, any such endeavour or design can be supposed to have place, as that of effecting an alteration of the kind in question by his own single power, without aid from any one else.

The truth is—that, on this occasion, it was my own unfortunate case that occupied the first place in my view: for, saving all proper exceptions, such is the nature of man, self will on every occasion be intruding itself. Among my own *endeavours* as well as designs, has been *that* of causing to be printed in the Spanish language and circulated in Spain, written discourses more than one, in relation to which I cannot flatter myself with any the faintest hope, that, in the minds of gentlemen, the sight of them could fail of producing, though to my own most sincere regret, sensations of a cast more or less unpleasant: nor, in regard to some of those same writings, can I help being sincerely apprehensive, that, in the eyes of the gentlemen in question, the endeavouring to give publicity to them, would be the endeavouring to produce an "*alteration*" in that same political constitution.

True it is, that on this occasion, so far as regards my own personal safety, I do not, from any such conception in those or any other Spanish breasts, see any cause for apprehension. But an endeavour of this sort could not be used without *assistants:* without assistants, who, in the language of the proposed Code, would be *accomplices:* nor, by and between the principal and such his accomplices, could any correspondence be carried on without that which in the same language would be a *conspiracy*. Among these accomplices would in this case be a *translator*, a *printer* and a *bookseller*. Of these the *translator* might possibly be one, who would not be in any greater danger of death, or whatever were the other punishment, than myself: and to the case of the *printer*, the same consoling possibility may be found applicable. Still there remains the *bookseller*, without whose assistance my plot for the contributing, in conformity to articles 4 and 13 of your Constitution, to the greatest happiness of the greatest number of your fellow-citizens, whatsoever in this shape or in any other may be in my power, could scarcely by any means set itself to work. And thus it is, that if the wish that seems to be entertained as to this matter, by the gentlemen in question, as evidenced by this part of their proposed Code, is carried into effect,—mine stands on the verge of hopelessness.

Even if the net, spread by the word *alterar* in article 191, were not sufficient to catch us, (I mean myself and my accomplices,) another net of not much less amplitude, I see spread for us, in the next article, by the words *embarazar sus sesiones y deliberaciones:* penalty, death as before. For, of the arrangement that my temerity might find to propose, what *embarrassment* it might happen to this or that one to produce in the deliberations of the august body, should they ever come under its view, if it were during the time of its having the happiness of numbering the gentlemen in question among its number, I tremble but to think of.

On this occasion, one little difficulty in particular there is, the effect of which could scarcely fail to produce, more or less of *embarrassment* in the deliberations in question, should any endeavour be thought fit to be used for the solution of it. In pursuance of any such mortally wicked design as those above described, should a man content himself with doing what at present I am doing—that is, with the employing a non-Spanish language in the composition of such his political poisons, —in this case, such is the lenity manifested, by article 598, his portion of punishment is to be no more than the *half* of that which he would suffer were it in the Spanish language. *Duros*, yes: *anos*, yes.....but I hope I am not using *satire*, and I am sure I am not using *invective*, when I observe, that neither in Euclid, nor in any other book, would gentlemen be able to find any process, for the bissection of a punishment, of which death is to be the result.

One manifestation more, and that a finishing one, of the care taken by gentlemen for the preservation of the press from abuse, remains yet to be brought to view. It is the establishing — Yes, the establishing in regenerated Spain—an *Index Expurgatorius*. An Index Expurgatorius! and by whom composed! composed by no less an authority than a new species of supreme legislature, proposed to be established for this single purpose: a legislature, in which the initiative function is to be exclusively in the *Gobierno*, (the septemvirate of ministers, every one of them appointed and at pleasure removeable by the king:) the initiative function in this *Gobierno*, and the consummative in the Cortes. Of this proposed new legislature, I find mention made—not only in the cluster of articles, which form part of those especially destined to the preservation of the liberty of the press from abuse, namely, in articles 599, 600: but in that preceding cluster, which has for its special destination the preservation of the Spanish mind from

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error on the field of religion: and, on both occasions, the existence of an instrument of this sort, framed by the new authority just mentioned, is supposed, and in a manner taken for granted.

It is therefore in their zeal in support of religious truth, that, in the exercise of the conjunct attributes of *impeccability* and *infallibility* above spoken of, this manifestation of zeal for truth in general, in the breasts of the gentlemen in question, appears to have taken its rise: and what cannot be denied, is—that by him, whoever he may be, by whom, for the happiness of mankind, those same divine attributes happen to be possessed, exercise too extensive cannot be given to them. But in proof of a man's being so gifted, evidence, something more conclusive than his own insinuation, nay even than his own assertion, however positive, may, it should seem, not altogether unreasonably be required.

Before this finishing measure for the consummation of political security receive the sanction of law, there is one other thing, Sir, which I could not but be glad to see recommended to the consideration of the august assembly, not to speak of the supremely influential body—the *Gobierno*, of whatever individuals it may at this moment be composed. This is—supposing this extraordinary duty on their shoulders, and anything like adequate time for discussion allotted to the business,—whether from year's end to year's end, for the fulfilment of their ordinary duties, there would be so much as a single moment of time left.

I have spoken of *logic*, as an art, which, though not quite so agreeable, has, with reference to the greatest happiness of the greatest number, rather more of the useful in it than the brilliant art of rhetoric. There is moreover another dull and plodding kind of art, which, if a recommendation from me could promise to itself any weight, I would take occasion, from the incident here in question, to recommend to the attention of gentlemen in your exalted station. It is the art of *mensuration:* I do not mean as applied to *land* or *timber*, but as applied to *time:* to time on the one hand, compared with the quantity of business to be done in it on the other. From a want of proficiency in this art, such as it is, two effects both of them of rather an unpleasant nature, are liable to be produced: the exclusion of good measures, and the adoption of bad ones: the exclusion of good ones, for want of their being so much as proposed for consideration; the adoption of bad ones, for want of their being in a sufficient manner made the subjects of consideration. If, of this last-mentioned effect, an example should be desired, a not uninstructive one may, I am inclined to think, be found without much difficulty, in the recently established prohibitive and restrictive commercial, or, as I should rather say, anti-commercial system, under which, trade was to have been increased by the exclusion of customers.

Gentlemen having, in the manner you have been seeing, Sir, shown their sense of the necessity as well as importance of the office of Censor,—having moreover assigned, as and for the whole or a part of its business, the composition and continual completion of this same instrument of legitimate order, I mean the *purifying Index,*—it being also considered how natural, on the part of the inventor of any instrument, the wish is—to see the application of it placed in his own hands,—what if the powers—the whole powers of it were to be conferred on the gentlemen in question, I mean on all five of them, and in a state of exemption from all other cares, during their respective lives? In this power, for further security, might be included not only all actually existing works in their entire state, but all such *doctrines or "maxims,"* as, *if* they were in existence, would be possessed of the "*destructive*" or *subversive* tendency so often mentioned. In this case, however if it were in my power to make conditions, one little condition I would venture to propose to them, and that is,—that they would not insist upon attaching to the publication of the books in question, or of the maxims or doctrines in question, any of those severities, by the proposal of which their religious and patriotic zeal has on the present occasion manifested itself. No, Sir: if in the eyes of the public at large, their intellectual worth be but half as great, as, from the above quoted passage in their preface, it should seem to be in their own, the authority of their names, when employed in marking out for exclusion from all eyes and ears the obnoxious works, will be quite sufficient, without the aid of penal visitation or physical repression, performed in the proposed or any other shapes.

After all, thus much must be confessed:—be the instrument what it may, destroy the instrument you prevent the abuse of it: destroy eyes, you prevent the abuse of eyes: destroy ears, you prevent the abuse of ears: destroy hands, you prevent the abuse of hands. destroy liberty, you prevent the abuse of liberty. Such would be the effect, supposing the destruction total, and thence impartial. But, so far as either the liberty of the press, or the liberty of discourse through the medium of any other instrument, is the subject, the destruction which the gentlemen in question aim at effecting—the destruction, which they even profess to aim at effecting—is not total and thence impartial, but decidedly partial: and being so, the effect of it, in so far as it has any, will be—not to prevent, but to establish and secure, the abuse of the liberty of the press; in a word, of the liberty of discourse: of the whole of that branch of liberty which they thus take in hand. For wheresoever, by any person, on any controverted point, a judgment is to be pronounced,—what can be a greater abuse of the faculty of discourse, than the keeping all the arguments on one side in a

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state of suppression, or though it be but restriction, while those on the other are left in a state of liberty? of absolute, or even though it were but comparative, liberty?

In regard to this matter, one very simply expressible mistake seems, from first to last, to have taken possession of gentlemen's minds, and guided their operations: I mean, the mistaking a *cause* for a *remedy:* the taking, for a remedy to the disease they have had in view —for a remedy and that an indispensable one that very morbific cause, but for which the disease would not have had existence. Supposing that to be the case, apply the supposed remedy, you produce the disease: burn the remedy, you kill the disease. Such, after a three years' experience of the imagined remedy was the practice of the Anglo-American United States: and, after twenty years of uninterrupted experience, the salutary efficacy of that same practice has received in the face of all mankind as complete perhaps a confirmation, as any practice, political or even physical, ever yet exhibited.

LETTER IV.

On the severity of the ulterior means, employed for securing against amendment, all imperfections in the political system, and for preventing the national will from manifesting itself.

SIR,—In the title of this fourth letter, as it is announced in the first, the words *severity of the* were, I fear, omitted. They are requisite, however, for giving expression to the idea, which, in reviewing that part of the matter, and penning a title for it, was uppermost in my mind. On a second glance, along with what bears special reference to that circumstance, I find some matters, of which the same thing cannot, I must confess, be said with equal propriety.

On the other hand, the subject, on which it touches, is one of which special notice is taken in your letter: what is said in relation to it will help to prove the respect with which your commands have been attended to; and whatever may be the offence committed against the laws of method as above, it is on this circumstance I must rely for whatever atonement it may be in my power to make.

Pena de muerte! Pena de muerte! Pena de muerte! By these words, I see, with grief of heart, a war of mutual extermination organized; Code in hand, I see partisans of the king and partisans of the people, under the name of partisans of the Constitution, slaughtering each other, and thus maintaining order in the legitimate style. No man can serve two masters. So at least I have read somewhere: and I am inclined to think there may be some truth in it. Looking to the people of your peninsula, I see two masters made for them: one all head without body: the other all body without head. No man being able to serve both masters, I can see no man who is safe. In the Anglo-American Union, no man has any master; and there everybody is safe.

In that seat of universal security, there were, for a course of years, two parties, and between them war was waged with a fury not to be exceeded, even among you. The weapons, however, were words only, not swords or bullets: "satires and invectives" met in incessant clouds: but they met tax-free: no *duros* were ever paid for them: ink flowed in torrents: ink on both sides: but, of blood, not a drop on either side. Little by little, the less liberal party was silently absorbed into the more liberal: finally there is no party, and now, even in words, it is all peace.

Yes, Sir, between the death to preserve "liberty" (Tit. 1. Cap. 1.) and the death to preserve "Monarchy," (Tit. 1. Cap. 2.) I see every man between two fires.

Remembering the use made, on a former occasion, of the word *corporation*, as mentioned in my tract on the liberty of the press, &c., I see in Article 191 a somewhat more efficient use found for it. A sympathy, I hope not unpardonable, places before me, on this occasion, my brethren of the Cross of Malta. If they are tired of life, the words "*ò á que se radiquen en otras corporaciones ó individuos,*" may upon occasion help them to get rid of it.

But, perhaps, the citizens who, all over the kingdom (if our newspapers do not deceive me) are still meeting for the purpose of considering what, under articles 4 and 13 of the Constitution, may be most conducive to the greatest happiness of the greatest number, if it were only that they may learn how to give their votes,—may not be quite so eager to see themselves killed, as the Committee seems to be to see them killed: and, if they are not altogether pleased at the thoughts of being killed under the name of citizens, I should not expect to find that the thoughts of being killed under the name of members of corporations would render them more so.

For how many things which they themselves have done, and which I cannot but applaud them for having done, do I not see gentlemen appointing this same punishment of death! the only punishment, the mischief of which is, in case of misapplication, altogether out of the reach of remedy! Right, that which at the moment suits us: wrong, that which does not suit us:—this, or something like it, is it not the principle?

As it is with vituperation and defamation,

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so, without much difference, is it with sedition, insurrection, and their et cæteras. In a government that has for its object the greatest happiness of the greatest number, little or no need is there for any such denominations with exclusively appropriated punishments. A public functionary is a *man:* gentlemen do not seem to me to be altogether aware of this: with my respectful compliments, do me the favour, Sir, to convey to them the information of it. A public functionary is a man. Not only is his reputation the reputation, but his person the person, his property the property, of a man. By sedition and so forth, if any real mischief is done by it, it is to the person or the property of some man that the mischief is done. Ill indeed must the public functionary, whoever he is—the Monarch if there be one, ill indeed must he have comported himself, if, on the part of the people at large, there is not, on every occasion, and in all manner of ways, more promptitude to afford protection against injury, in this or any other shape, to him, than to an individual not so distinguished.

In a country, the government of which has for its end in view the greatest happiness of the greatest number, let a man seditionize—let a man insurrect—see what he will get by it. He will be laughed at: laughed at, as an untoward lamb might be, if seen running and butting against its mother: he would be laughed at, and there would be an end of it. Colonel Burr insurrected: Colonel Burr tried to make himself Emperor of Mexico: Colonel Burr thought to make himself Emperor of the United States: many is the laugh I have had with him about all this—I, who write to you. In the United States, has he had his entrails torn out of his body? a man in his place would have been so dealt with in England: has he seen them burnt before his face? No: there he is in New York, subsisting quietly, as other lawyers do, upon the indiscriminate defence of right or wrong, now at the end of his career, just as he did at the commencement of it. Ask Miss Wright, Sir, if it be not so—see what her book, (Views of Society and Manners in America, by an Englishwoman,) translated ere this into French, says of him in one of the notes.

Out of the 639,—*that* being the whole number of the articles in the Code, deduction made of those general ones, 190 in number, which are not occupied in the creation of particular offences, or the appointment of particular punishments,—out of this number of 639, not more than 89 had I run over before I had counted 21 as the number of times in which this same punishment of death had been attached to so many different offences. True it is that, in speaking of penal laws, to speak of the multitude of the laws as a conclusive proof of severity on the part of the whole system,—to speak of *multitude* in this case without notice taken of *extent*,—is, I am fully aware, a mode of speaking no less pregnant with misconception than it is frequent. In the English chaos, for example, where stealing or destruction is the mischief to be obviated, you have one law for one sort of vegetable, another for another: and so throughout: a plan, according to which, the vegetable kingdom would of itself, if all other penal laws were abrogated, furnish matter for between 50,000 and 100,000 of them, and still leave all but a small part of the field of mischievous delinquency uncovered. But in the present instance, the rigour of the punishment will be found not mismatched by the amplitude of its extent.

But the striking and deplorable circumstance, is—to find the highest lot in the scale of punishment attached to so great an extent, to acts, in regard to which, in that system of law which is productive of the happiest effects, it is after such a length of experience universally understood and acknowledged, that there exists not any demand for punishment in any shape.

As to the taking of these cases, or any of them, one by one, and, by a regular application made of pre-established principles, considering, in the first place, whether the act ought to be placed upon the list of offences, in the next place, whether death would be an apt punishment for it, and if not what other would be,—no such discussion, Sir, can I, upon the present occasion, think of attempting to trouble you with. In any Code of my drawing, this would be done, and in a manner which in my eyes would be complete, at a much less expense of words than the least that could be bestowed upon it in any work having for its subject a Code by another hand, even supposing the particular arrangements determined by a set of pre-established and declared principles: and not, like the one in question, so completely and even avowedly unprincipled, that a volume might be occupied in the endeavour to reach by conjectures, antecedently to examination, the considerations that, in the character of *reasons*, *may* have given birth to this or that one article.

On the subject of *religion* indeed, it being the only one which has received any special mention in your letter, I had, at the time when the first of these of mine were sent off, written a few pages, to which I thought of giving insertion in this. But, by a second glance on this part of the proposed Code, observation was insensibly and perhaps unfortunately elicited, in a quantity much too great to be consigned to a letter, in which any other subject were brought to view. Should it ever reach your hands, Sir, it will accordingly be in the form of a 7th letter, written in addition to those announced in the first.

One word more about death: about the grim tyrant, and the once established and, established or not, everywhere honoured Code, by which the door was shut against him. Seeing the use made by the gentlemen in question of this instrument, hardly should I have expected

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to find that of these "*most esteemed European Codes*," the wisdom of which (as p. xii. of their Preliminary Discourse informs us) they had made theirs, this same Tuscan Code had been one: this same Tuscan Code, in which, of this same instrument, no use at all was made. Either my memory deceives me greatly, or, in some authentic statements made at the time, I read, that after the innovation thus introduced, —though anything like the whole of the benefit which by its leniency the Code was calculated to produce, had not yet had time to manifest itself,—the number of those crimes, to which the punishment of death had been used to be attached, had not received increase. Yet so it is, that not only the Code of the French Constitutional Assembly of 1791, but this same celebrated Tuscan Code, had passed under their review. So in page xv. of their Preliminary Discourse they expressly tell—*us* I was going to say—I beg their pardon, Sir, I should have said tell—*their colleagues*.

P.S. Before this letter goes to the post, I have just time to acknowledge the receipt of a 2d letter from you, dated Paris, 26 Sep. 1821.

Though what was said of me by our friend was the pure result of his own generous zeal, and altogether without warrant from me,—the consequence which has resulted from it is—not in the less, but in the greater degree, a source of gratitude in my mind as towards him, as well as satisfaction and pride on my own account: for, never was declaration more sincere than mine was, when I spoke of myself as receiving honour as well as pleasure from such a correspondence. Few things could have contributed more strongly to confirm me in that sentiment, than the frankness of your consent, to that publicity, by which, whatsoever service such a correspondence may be capable of rendering to that country which is the object of our common affection, will be so effectually cleared, of the inconveniences with which it would otherwise have been clogged.

At the same time, believe me, Sir, it is not without the sincerest sympathy and unfeigned uneasiness that I can reflect, as I have but too much and too frequent occasion to do, on the invidious and unpleasant situation in which it has been impossible for me to avoid placing you, by the necessarily unwelcome freedom, which I have all along found myself compelled to use in speaking of this production of your illustrious colleagues. For, how can they do otherwise than behold in you the cause of as many strictures, of which, should they be thought to amount to anything, sensations, of a nature very far from pleasant, cannot but be the result? But, in the opposite case, and in proportion to the importance of any of the suggestions which it has fallen in my way to submit to you, the warmer your love for that country of which you are one of the most conspicuous and brightest ornaments, the more valuable in your account will be the indemnification, which, in the character of a Spanish citizen and a representative of the Spanish nation, you will receive.

LETTER V.

Further grounds for the apprehension that, by the proposed Code, the interest of the subject many is, designedly or undesignedly, sacrificed to that of the ruling few.

Strange indeed, unexampled indeed, would the case be, if it were otherwise: but, so far from being a reason for the omitting the mention of any instances in which it is exemplified, the strength of the propensity in human nature to produce such sacrifices, is a reason why the search after them should be the more rigid, and the display of them the more complete.

To attempt to bring to view the several particulars, by the observation of which a supicion to this effect was produced, would be to attempt to bring to view little less than the whole contents of that same official and pre-eminently important work. I must content myself with a few samples. But they shall be such as are either all-comprehensive in their extent, or do not want much of being so.

Example 1. *Fundamental principle neglected.* What I have here in view is—the profound silence as to the fundamental principle of the Constitutional Code: as to the two leading articles 4 and 13, into which by far the greatest part of its merit and beneficial influence is condensed: namely, the so often mentioned principle, by which the *greatest happiness of the greatest number* is laid down in form in the character of the proper end of government, and as the object to the attainment of which the several arrangements of detail included in that same Code, were meant to be understood as having accordingly been directed. The application, which this your troublesome humble servant makes, of this instrument of Spanish construction—you see, Sir, how continual and indefatigable it is: it is a light, by which every step in his career is lighted. Such is the use made of it by an Englishman. The gentlemen in question being Spaniards, how comes it that, all the time that they have been at their work, this matchless Spanish instrument has been lying in its case? how comes it, that these articles, to which, from first to last, reference express or tacit could not consistently with consistency have been omitted, remains from first to last a dead letter in their hands?

These same articles of this Code,—for what purpose were they put there? Was it only for show? The authors of that same Code—

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was it not their intention the principle should be made use of? The articles—were they placed there in no other character than that of so many flowers of rhetoric?

But, the authors of this proposed penal Code, it is with them that our concern is at present. Of the neglect in which they have left this light of lights, what can have been the cause? Sir, can it have been any other than this; namely, that it did not suit their purposes? From what follows, your judgment on this point may perhaps acquire some assistance.

Example 2. *Rationale rejected.* What is above leads me immediately to the matter of the *rationale.*

Of my plan, the rationale is an *essential*, I should rather say *the characteristic*, feature. But what does it consist in? In neither more nor less than the undiscontinued application of the above-mentioned fundamental principle: an application of this basis of your constitution to every the minutest line in the several arrangements, by the making of which, the operations of the legislator are carried on. In the very act of proposing this accompaniment, a sort of challenge to all legislative draughtsmen was contained. From the challenge thus given, the gentlemen in question shrunk. Why, Sir, did they shrink from it? To their constituents, as I have shown, to the subject-citizen as such, it would have been at once a source of *interpretation*—a fund of *instruction*, *moral* as well as *political*—a source of *security*, satisfaction and comfort: a source of security against arbitrary rule in the hands of the *legislator*, and against arbitrary interpretation in the mouth of the *judge*: to the judge, a continual *guide*, but at the same time as continual a *bridle*: to the body of the law, in the whole and every part of it, an *anchor*, giving stability, just so far, and no further, as reason, assisted by experience, shall have shown that stability will be conducive to the all-comprehensive and all-commanding end so often mentioned. This being among the undeniable properties of the instrument in question, why, Sir, I ask once more, did gentlemen shrink from it when offered to their hands? Sir, I will tell you plainly. They had two *reasons*, for turning their backs upon an instrument, the matter of which is composed of *reasons* in another sense. In it they saw a *guide*, but a guide whose course it did not on every occasion suit them to pursue. In it they saw a guide, but in it they at the same time felt a *bridle*: and all this in both their capacities, that of legislative draughtsmen, and that of sanctionative legislators. To which may perhaps be added, that, not impossibly in their view of the matter, to construct, and make undiscontinued application of, an instrument of this nature, was not quite so easy as to propose it.

In that paper of mine, the heads of which I have had occasion to submit to you in the first of these my letters, the two last heads are Section 10. "*On the part of an individual proposing himself as draughtsman, &c., willingness or unwillingness to interweave in his draught, a rationale as above, is the most conclusive preliminary test, and that an indispensable one, of appropriate aptitude in relation to it;* Section 11. *On the part of a ruler, willingness or unwillingness to see established an all-comprehensive Code, with its rationale, as above, . . . is among the most conclusive tests of appropriate aptitude with reference to such his situation.*"* *Among* the most conclusive, I said: speaking of a ruler, in whatever rank and in whatever department: and, when speaking of a ruler in the rank of supreme legislator, or in that of possessor of a share in that all-commanding power, might I not have said absolutely *the* most conclusive?

Sir, the time, at which these propositions with the demonstration of them were penned, was by a long time anterior to that in which, by your favour, the proposed Code with the preliminary discourse prefixed to it came into my hands. To my mind, no otherwise were the authors of that work present, than all other men, by whom that same or the like pre-eminent situation shall have been filled, were, are, and will be present. But, if and so far as that which of all men without exception in their situation is there said, is true,—of them in particular it is true: nor can it, consistently either with sincerity, or consistency, be retracted.

In that work of mine, in which, of the sort of instrument in question, with its use, a description more or less particular is given,—in that work, the existence of which was assuredly no secret to any member of the Spanish Cortes, nor to any of the gentlemen in question in particular—in that work is even contained a sample of the application made of this same instrument:—a sample of the mode of applying it, and of the sort of work produced by it. To judge from a paragraph in their preliminary discourse, it looks as if somebody or other had even been troublesome enough to endeavour to draw their attention to this same part of that same work:—and "*What say you to this?* will not you give us something of this sort in your Code?"—one would think these or some such questions had been put to them: put to them, and in so troublesome a way, that, to this matter, in that same preliminary discourse, something, by way of excuse for their silence on the subject, was thought necessary: at any rate, that on this subject something should be said. Be this as it may, in that same page of theirs, on this same subject, something actually is said.

What is it? Sir, it is what I am truly glad to see. For, (as you have seen already, in the way of *allusion* at least, statement being referred to in another paper,) as in this way, in my dull logic, you have seen reasons *for* the use of reasons,—so here, in their brilliant rhetoric, we have gentlemen's reasons *against* the use of reasons.

First comes their all-comprehensive determination—their determination, respecting all

* See vol. iv., p. 563-4.

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such parts taken together as come within the field of their labours: then come exceptions, six in number: exceptions, speaking of six points in particular, in relation to which, thus as it were in a parenthesis, such reasons, as it has seemed good to them to submit to your consideration, follow.

With regard to the *tout ensemble*, their determination being—not to give any reasons bearing separately upon the several arrangements, or any of them, with the exception of the six just mentioned,—in the place of the excluded reasons, they give you one reason—one reason, which in their view is a conclusive one—for not giving them. This reason, what is it? Ah! Sir, disallow it if you can,—disallow it, if you can find it in your heart to be so ungenerous. Sir, in the all-sufficiency of that unerring test of right and wrong, which you all, Sir, have the self-satisfaction of bearing in your own breast—it is in that security that they find a succedaneum, to everything, which, on any occasion, it would be in *their* power to find in the shape of a reason: a succedaneum so fully adequate—a substitute so much better than merely adequate, that anything in that way on their part would be worse than useless. To the conclusiveness of this antirational reason, what objection can you oppose? Sincerity will suffice to prevent your disputing it in your own instance; politeness, in that of any of your colleagues.

After an observation, respecting the matter of the *Title* termed by them the Preliminary Title,—namely, that, giving as they do the whole of it, they do not give any part of it over again, regarding as they do any such repetition as useless,—"because," say they, "we regard every such addition as useless" (a conception, in which no man can, I think, refuse concurring with them) after so saying, they go on in page xiii. and say, "As little will the Committee—as little will it give any exposition of the reasons (*razones*) on which it has grounded the several articles respectively, for that *they* (meaning doubtless the reasons in question) cannot have kept themselves hidden from the superior perspicacity (*illustracion*) of the Congress:" meaning the Cortes, into the ears of which, in full assembly, the stream of this eloquence, I take for granted, was pouring itself forth.

By this *illustracion*, a term for which, in the sense in which it seems here to be employed, I find not, in my own language, any exact equivalent—for *illustration* will not serve—by this one endowment, that which gentlemen appear evidently enough to have in view, is—the pair of contiguous organs, to which I had occasion to make allusion in the second of these letters: namely, the same to which Dr Spurzheim would, after a sufficient inspection, give the denomination of the organs of *impeccability* and *infallibility*: organs, which, without need of any such assistance as that of the ingenious anatomist, all rulers in chief, except of late years those of the Anglo-American United States, have so universally felt upon their own foreheads; and of the extraordinary prominence of which, in their own instance, the authors of your Constitutional Code, so well followed up by these successors of theirs, have given such extraordinarily prominent demonstrations.

Now, Sir, as to these same colleagues of yours, the matter must be left to themselves. But as to yourself, Sir, pardon me,—if so it really be that you are a sharer with them in the good fortune of being in possession of these same organs, or either of them, it is plainly more than you yourself know of: you might as well not have had any such things. Of the possession of any such useful implements had it happened to you to be conscious, never could I have received any such letter, as that, by the receipt of which, your humble servant received that honour, of his gratitude for which you see the fruits. In the course of the contest for your favour, here, Sir, you have two compliments to choose out of: which of them is most in accordance with truth? which of them is most in accordance with your taste?

For the reason above-mentioned, to their colleagues, say the gentlemen in question—to all these representatives of the Spanish nation without exception—any such implement as that same *rationale* would have been useless. Well, for the moment, and for the purpose of the argument, be it so. But these same distinguished citizens, whom, to the number of from 150 to 200, they are thus addressing—in the whole Spanish nation, were they the only individuals, by whom either the faculty called *reason*, or the faculty called *sensibility*, was possessed? The privileged organs in question, by which governors have hitherto regarded themselves as distinguished, are they in your country in the possession of the governed likewise? If so, what need can there be of governors? And here, alas! comes one of the proofs of the position which gives title to this letter:—namely, that, in and by the official work in question, the interest of the subject many is, designedly or undesignedly, sacrificed throughout to the interest of the ruling few. Look, Sir, to the excluded foreigner: look to these your select, your native legislators:—the whole body of their fellow-countrymen, their security, their satisfaction, their instruction—which of all these objects has ever been forgotten by the foreigner? which of all of them was remembered by these their representatives in this effusion of their eloquence? But their colleagues, for whose ears the compliment had been composed—these colleagues were present objects; constituents, all of them distant ones—all of them distant from their thoughts:—by the interest of the select and present and associated *few*, the whole field of their vision was pre-occupied; the interest of *all* was, in their eyes, too minute an object to be a perceptible one.

Six, however, though no greater than six, is the number of those points, to which, in the opinions of these your selected colleagues, your

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all-sufficiency, Sir, (*yours* is of course here plural,) did not, at that time, extend. Accordingly, in relation to these several points, they proceed, or at least profess, to lay before you their reasons. Why? because these were the points, in relation to which, amongst certain persons not named or indicated, the most considerable controversy had had place. In this controversy it is that they find the source of an obligation, by which they feel themselves called upon to be thus particular: "*solo se cree obligada á indicarlos motivos que en algunos puntos muy controvertidos la inclinaron á la opinion que ha abrazado.*" p. xiii. The points are in brief as follow:

1. Drunkenness.—Shall it in any case have the effect of warranting any mitigation of the punishment? Answer: No.
2. Transportation.—Shall it be employed as a punishment?—Answer: At present, no: in the contingent future, yes.
3. Stigmatization.—Shall it be employed as an ingredient in any lot of punishment? Answer: Yes; but in no other case than that of condemnation to hard labour for life.
4. Asylum.—On the ground of its connexion with religious worship, shall any place continue to possess the property of affording impunity to delinquents? Answer: No. This unanimous.
5. Pardon.—Power of pardoning, shall it be continued to the Monarch. Answer: Yes; but subject to certain restrictions. Allusion is made to them, but no reference in figures.
6. Judicatories of exception.—Shall there be any? Answer: Two only; namely, military and ecclesiastical. Military, for military offences; ecclesiastical, for ecclesiastical.

Now then comes a question. All-sufficient with regard to all other points in the legislative compass, how comes it that gentlemen's organs fail them when applied to this half-dozen? Compared to what is left untouched, these are but as so many drops, in that ocean, to which, as above, they have given the character of *the Pacific*. And so, in the conception of these gentlemen, only in so far as controversy has had place, can there be any demand for reason! Sir, among the points touched upon in my Code, whatever may be the number of those to which it has happened to have produced controversy, the number of those to which no such accident has happened, I should expect to find still greater. Is it only as an instrument of victory, Sir, that reason is of any use?

On the above points of exception, to say anything more would be wandering from the announced purpose of this letter. One alone, namely, *Judicatories of exception*, upon looking into the article on this subject in the proposed Code, presented matter which seemed not inapplicable here; and with this the present letter will close.

Example 3. *Method anti-popular employed:*—method, indicative of disregard to the interests of the subject many. In my own Code, the method pursued was suggested, partly by considerations of a purely logical nature, partly by considerations of a moral and political nature. Those of a purely logical nature belong not to the present occasion: those of a mixed nature, partly logical, partly moral and political, apply to it: and by a principle of connexion, of which it has not happened to me to see any notice taken elsewhere.

In regard to the order to be given to the several groups of *acts*, converted by prohibition and punishment into *offences*, considerations of a moral and political, concurred with those of a logical nature, in producing the determination that was pursued.

Where, of one of two objects, a perfect conception may be conveyed, without any conception conveyed or entertained of the other, while the converse of this does not hold good,—give the first place to that one, the conception of which is thus independent of that of the other. On the opposite plan, two objects will unavoidably be spoken of at the same time: the one directly and explicitly, the other indirectly, and in the way of allusion: and confusion will thus throw its clouds on the whole texture of the discourse.

To the domain of logic belongs this rule. By it has arithmetic been guided in the order given to the numbers in the numeration table.

Apply this to the matter of a Penal Code. Of offences against individuals—against individuals determinate and assignable—the mischief is intelligible to all: intelligible in all its shapes, upon the bare mention of it; intelligible, without any the least need of reference to offences against this or that particular class of not assignable individuals, or to any of those against the government, or the nation at large: the offences of which two last divisions have for their common character, that the mischief produced by them affects not any one individual or class exclusively, but, if it affects any one, affects the whole. Of offences of the first description, the mischief may be said to be *actual:* in the case of those of the two last descriptions considered as such, it is only in *tendency* that the act is mischievous. In this or that instance, the mischief which is but in tendency may indeed have actual mischief to any amount for its accompaniment: in which case, the author may be dealt with accordingly: but, when it stands clear of any such accompaniment, the demand, whatever it be, for prohibition and punishment, may still remain: of that mischief which is in tendency only, the correspondent actual mischief forms the sole and indispensable basis. From those of which the mischief is but in tendency, suppose it ascertained that no actual mischief can in any shape result, the ground for placing them

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in the catalogue of punishable offences vanishes.

Note that, to be *actual*, mischief must consist either of pain or loss of pleasure: pain in some determinate and assignable shape, or loss of pleasure in some determinate and assignable shape.

Such being the order prescribed in the first instance by logic, observe now the consequence of it with regard to morals and politics.

At and from the very commencement, of a Code commencing in this way,—every man perceives, at first view, the benefit it has conferred on him, the care which the legislator has taken of his interest—of his happiness. Let a man but open the Code, by the very first glance he casts upon it, a conception thus satisfactory, how can it fail to be conveyed to him? What man is there, that has not, in some shape or other, a body, a mind, a reputation, property, a condition in life? In the prohibition and punishment, attached to acts, by which, through injury done to those several possessions of his, his happiness is liable to be diminished, he sees the protection which, in these several shapes, has been provided for him by the law. In the legislator he beholds a kind guardian, to whom his welfare, in all its shapes, has been an object of all-comprehensive and laborious solicitude.

Instead of offences against individuals, let offences against the government now occupy the first place. Everywhere but in the Anglo-American United States, religion being seized on and converted into a state-engine, employed in giving support to the power of the rulers,—the care for the support of religion in this character, will, in some way or other, be combined with the care for the support of government.

The protection he now sees afforded, to whom does he see it afforded? To himself? No. But either to an Almighty Being, to whom it cannot be of any use, or to another man or set of men among whom he is not included. Here then you see, Sir, the advantages that have just been brought to view vanish.

Returning now to the former case,—suppose the legislator, by what considerations soever induced, whether by the above logical rule, or by the political consideration—regard for the greatest happiness of the greatest number—suppose him to have, in his Penal Code, begun with giving the first place to the class of offences against individuals. This point settled, suppose him to have taken up the subject of offences against government. The government in question is (suppose) a monarchy: chief functionary, the monarch. What follows? Seeing in this man neither more nor less than a man, he would, perhaps, as in the Anglo-American United States, have regarded the security of this man as being sufficiently provided for, when provided for in exactly the same way as that of all other men: if not, he would at any rate have inquired, whether in this case any difference should be made: and if yes, what, and on which side, and on what account: and so on, in regard to all classes of persons, functionaries or not, by whom, or in whose behalf, he found *privilege* in any shape enjoyed.

Unfortunately, in those same Codes of greatest credit and "reputation in Europe," (p. xii.) drawn as they have all been by men, employed by a supremely ruling one, and themselves belonging to the class of the ruling few;—and of course careless to what degree they made sacrifice of the interests of the subject many, to the interests, real or supposed, of the said ruling few and supremely ruling one;—in these exclusively consulted Codes no such simple and natural order of insertion has been observed. How should it have been? No such order would have suited the purposes the ordainers of them had in view.

In my view of the matter, title to regard is determined, and degree of regard measured, by the numeration table: *two* have title to twice as much regard as *one: three*, to thrice as much; and so on. Accordingly in my Penal Code, my first care being to make provision in the most immediate way for the security of *all*,—thus it is that, no objection to this plan of arrangement presenting itself, nor any special use as derivable from any different one, it is by the cluster of arrangements employed in the establishment of *this* security, that the first place in that same Code is occupied. And thus, by this political consideration, has the order originally suggested by the logical consideration, in my view of the matter, been confirmed.

Not so, in the view taken of the matter by the bespeakers, nor consequently by the makers, of those same supremely accredited Codes. In their view of the matter, title to regard is determined and measured by DIGNITY: a sort of phantasm created by Power, in the imagination of Imbecility, for its own use.

Shaping their practice to this theory,—in the ruling one—in the monarch, who is upon earth—they have seen the vicegerent and express image of the person of him who is in heaven: in him they have seen the one for whose use all others were created; in the subject many, those who were created for his use. In him they have seen all excellence; in them all depravity: between the one and the other they have seen an intermediate class, composed of individuals, whose respective places, in the scale of excellence, moral and political, are in correspondence with their places in the conjunct scales of power, opulence, and factitious dignity:—endowments, derived all of them from the grace and pleasure of the ruling one.

Of this theory, an immediate practical consequence always more or less acted upon, and sometimes even avowed, is—that in the instance of every person to whom the protection

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is afforded, the punishment, employed in the affording it, ought to be high, in proportion to the height of the level, occupied by him, as above, in that same conjunct scale. Looking then, in the first place, to the heavenly monarch,—in his instance, taking for his opulence, that which it has pleased him to make over to his professional servants, they behold power and dignity infinite. Looking in the next place to his earthly representative, they behold power, opulence, and dignity next to his. In beth cases, the practical consequence follows as of course. As for the protection of the mind, the reputation, and the peculiar property of the heavenly monarch,—so for the protection of the body, and condition in life, as well as of the mind, reputation, and property, of his earthly representative,—no punishment can be too afflictive.

Buonaparte and his draughtsmen saw in every *Regicide* a *paricide*. A more convenient vision has been seldom seen. In this same vision, the gentlemen in question (I see) have been partakers. And so—to beget and to kill, to feed and to exhaust, to clothe and to strip, to love and to despise, are one and the same thing. Buonaparte—O "most puissant Prince!" —Buonaparte, upon looking round him, found he had begotten all whom he had left unslaughtered. Thus it is that Rhetoric—O ever ready prostitute!—prostitutes herself to despotism.

By the purely logical consideration, if I remember right, was the order of consideration and expression here in question suggested to me:—by the clearness, which, not only in this but in all other cases, is the result of that course of consideration, in which things connected with one another are taken, as far as may be, one at a time. Ample at the same time was the confirmation, which, in the present case, the logical rule was found to receive, from those considerations, of a moral and political nature, which belong, in a peculiar if not exclusive manner, to this same case. Intimate accordingly, in this case, is the connexion between the logical and the political considerations.

By the *logical* rule it stood ordained, that, in the arrangements by which protection and security were in the way in question afforded, all men without exception should come in in the first place, before any place was assigned to any such arrangements, as those by which additional protection and security came to be afforded, to men standing in this or that particular situation.

But, thereupon comes the *political* consideration:—in so far as distinction and opposition between interest and interest has place, by whom is presented the best title to regard at the hands of the impartial legislator? by whom is presented the title to a preference? by the *few* as such? or by the *many* as such? The question once put, the answer could not be dubious: the question itself presented it. To me it was presented between 50 and 60 years ago, by I know not what little pamphlet of Dr Priestley's: by your Cortes (A. D. 1812) it was adopted, and in articles 4 and 13 of your Constitutional Code, it stands established. And thus it is, that not only for order of consideration and discourse, but for title to regard and degree of regard, you have at once a standard and an example in the *numeration table*. A plainer, a more universally known, a more familiar, a more universally understood, a more indisputable, standard—can it be desired?

Judging of everything by this standard, I saw that, if, to any one more than another, power in any shape were given to be exercised over the rest, it could not, consistently with this standard principle, be given to him in any other character than that of Agent, and Trustee, and in that shape Servant, to the rest. Hence, for as much as, in respect of money, power, or factitious dignity, nothing could by any legislator be done for, or in relation to those same servants of the people, but at the expense of their principals,—hence, in my view of the matter, judging by that standard, for these same servants, so long as the interest of their principals was equally well provided for, too little could not be done. Not so in the view taken of the matter by the gentlemen in question:—not so in the view taken of the matter in any of those most "*accredited Codes of civilized Europe*," from the virtue and wisdom of which, a portion more or less considerable of theirs had been imbibed. No, Sir: on that subject—as everybody knows and feels—on that subject, everywhere but in the Anglo-American United States, the universal and all-ruling notion, is—that for these same *servants* it is not possible to do too much: and accordingly, the first thing that is done—everywhere done—for them, is—to declare them *masters*. Masters? Yes, and in such sort masters, that the character in which their natural masters, thus converted into servants, ought to be considered, is—that of so many animals of an inferior nature, created by an all-benevolent and all-wise being, for the use of these same self-constituted masters: their masters; or, as the more polished language of English aristocracy sometimes phrases it, their *betters*.

Such then are the beings who, in the first place, together with whatever belongs to them, are to be taken into account, spoken of, and provided for.

In the first place are stationed their peculiar endowments—the power, the wealth, the factitious dignity, with which they are invested: the peculiar endowments, together with the peculiar protection employed in affording a peculiar degree of security to the possessors of these same endowments: the peculiar protection and security, and thence the peculiar punishments, by the terror of which, all hands that might otherwise be tempted to make any motion, by which the enjoyment derived from these endowments, might be lessened, are to be arrested.

Under the late non-constitutional monarchy, the object of the first care, not to say the only

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care, was the providing this security for the monarch and his particular connexions.

Under the existing constitutional monarchy, the objects of gentlemen's first care, is—the power of that illustrious class of citizens, of whom they themselves constitute so distinguished a part: the care taken of this object is, in their language, the care taken for "*the liberty of the nation*." Their next care is, for the power and person of the monarch, who, from the condition of absolute, has by a precedent care been removed into the situation of constitutional, king.

Correspondent, in the eyes of the bespeakers and framers of "the most accredited Codes of cultivated Europe," and consequently in the eyes of the authors of this which is so soon to be numbered among those same accredited Codes,—correspondent to the excellence of the illustrious masters, is the depravity of those inferiors, who, in the character of servants, are placed under their rule: inbred is the refractoriness of those unworthy servants; wilful and perverse the blindness, by which that excellence is concealed from their perception: insolent, obstinate and incessant, the efforts they ever have been and ever will be in the habit of making, in the flagitious endeavour to withdraw their necks from under the too well deserved and altogether necessary yoke. For stopping a propensity thus perverse, what chance can be afforded, by any image less appalling than that of the dance of death, perpetually staring them in the face!

Full of these ideas, sword and axe in hand, gentlemen fall to work accordingly. They begin with killing all those, who, in any view, and in particular in the view of reinstating the king in the defalcated portion of his power, have the audacity to meditate any diminution of *theirs*, to make any "*alteration*," in any of all those things that have been done in their favour.

When these are despatched, the next set to be disposed of, are—all those by whom anything has been done, to the prejudice of the sovereign partnership concern, against the person or authority of the original parties, whose names stand at present but second in the firm. Death, on the one hand, for all those, by whom, towards the restoration of the old authority, anything shall be attempted or conspired to be attempted, in diminution of the new: death, on the other hand, for all those, by whom, for the augmentation of the new authority, or any other purpose, anything shall be attempted or conspired to be attempted, in further diminution of the old.

When, under chapter first of this title, one half of the people whose greatest happiness is gentlemen's object, are disposed of, and under chapter ii. the other half, what will be the number left alive?—For the solution of this question, no very deep skill in arithmetic seems necessary.

For all this riddance, though, if life be worth anything, nothing surely can afford a *justification*, the wisdom of the most accredited Codes of cultivated Europe, at any rate,—leaving out of the case the most celebrated of any of them—the Tuscan,—affords, it must be confessed, but too natural a *cause*; and, not only but too natural a *cause*, but, in so far as, on the part of those, in whose hands the care of the happiness of millions is intrusted, blind imitation affords an excuse, but too good an *excuse*.

True it is, that, for giving security in its several shapes to the whole number of those of whom the community is composed, appointment must be made, of some men in particular, to whom, in various capacities and ranks, the occupation shall, in a more especial manner, be assigned: not less true is it, that nothing could be more palpably absurd and mischievous than such a denial, if to those by whom security is thus afforded to others, that security which is necessary for themselves should, in any shape or in any degree, be denied. But even supposing, what is more easily supposed than proved, that, in the instance of these Trustees, any additional security, over and above what is given to them as principals, is necessary, still it will remain to be shown by any one who thinks he can show it, what use there can be in setting this ultra-security to stand first.

How naturally and frequently does the mischief aimed at by injustice recoil upon itself! how natural and frequent an effect of the *too much* is the *too little!*

When it is in no other character than that of a member of the community, that a public functionary applies for protection against injury,—all affections, all hearts, and all hands, are on his side: when it is in a distinct and privileged character, *many* hands, as well as *many* more hearts, will pretty certainly be against him. Well would it be for the country, whatever it be, if on this occasion instead of *many* one might say *all*. This, however, is unhappily not the case: since, be the distinction ever so absurd and mischievous, and in consequence of it the conduct of the functionary in question ever so unwarrantable, so it is that, in every country, by the laws of which such distinctions are made, community of sinister interests will have secured to him partisans and supporters in vast multitudes, and interest-begotten prejudices—the prejudices begotten by that same sinister interest—perhaps still more.

So much for theory. Look now, Sir, to experience.

In the Anglo-American United States, no instrument of *ultra security* has place. None whatever. And what is the consequence? that the security enjoyed by the functionaries in question—that the security enjoyed by the community of which they are functionaries—is the less entire? No: but that it is much more so. Take for example the chief. For injury done or intended in any shape to the

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president of the United States, no greater or other is the punishment provided, than for the like injury, to the man, if there be a man, who blacks his shoes. What is the consequence? is he the less safe? Not to speak of Asia, exists there in all Europe, a monarch by whom anything like equal security is enjoyed? Oh, no: nor ever will or can there be. The monarch is a mark for every madman to shoot at: and not only for every madman, but for every man who, in his own eyes, has reason to regard himself as suffering injury at the hands of the uncontrolled arbiter of his fate. And to what place can the monarch betake himself, without being encompassed by multitudes, to whose minds, notions to that effect may, for aught he can tell, be incessantly present?

Vainly would any one say—Ours is a Monarchy, and in a Monarchy these distinctions, together with a thousand others in the same strain, are indispensably necessary. This necessity, so lightly assumed, how comes it to be known to you? What ground have you assigned, what ground can you assign, for it? Absolutely none:—what experience there is, is all against you: experience for you there is none.

Suppose it were even as you say, what would it prove? only that monarchy is no fit form of government: and that this part of your constitution stands in need of alteration: and certainly not the less for the slaughter which gentlemen have been employing in their endeavours to prevent it. Were they aware—were they not aware—of the importance of the limitation, when, to the field of that legislative wisdom to which theirs disdained not to have regard, they assigned the limits which *Europe* has for its bounds? Be this as it may, had *America*—free and liberalized America—been within their view, and taken for their model,—Sir, you see the consequence. Taking Europe for their model, they violated the Spanish Constitution in its most essential and fundamental articles: they took for their end in view, how erroneous soever may have been their conception of it, the greatest happiness of the ruling few:—of that class of which they themselves are such distinguished ornaments: had they taken for their guide those essential articles of their own Constitution, they would have taken for their end in view the greatest happiness of the greatest number, and no such articles as those with which these two chapters of their Code are filled, would have been found in it.

Sir, it was their own doing—it was their own spontaneous doing—the heaping up all this pile of so much worse than useless punishments. By no article in the Constitutional Code were they compelled to it. By the Code, the *powers* were indeed created and conferred: but as to the *punishments*, if any, which should be employed in the endeavour to give effect to those powers,—on this head nothing can I discover but a blank.

Nor, because accordant with and confirmed by a principle of a democratical character, is there anything in this plan of arrangement,—in this order of insertion—that should prevent it from being pursued in a monarchy: in a monarchy, limited or even absolute: in a word, under any other form of government. For some time to come, it is not by every nation, that so much as the *desire* of living under a democratical government will be entertained: and of those by which it is entertained, it is not by every one that the *faculty*, of giving to any such desire its gratification, will be possessed. But, to no government—democratical, limitedly monarchical, or unlimitedly monarchical—to no government, however extensively and constantly determined in its conduct by regard for the separate and sinister interest of the ruling few and the supremely ruling one, to no government can it naturally be a discordant and unacceptable spectacle, to see the rule of action—at any rate *this* part of it—not only intelligible to all, but satisfactory to all: in no government can it be otherwise than satisfactory to its rulers to see their own personal security standing on its steadiest and surest basis.

Order of insertion is one thing: classification and nomenclature—(for they are scarcely separable) classification and nomenclature, by natural philosophers commonly comprehended under one name *method*, with or without regard to order of precedence, another. Of a *rationale*, formed by the undiscontinued application of the so often mentioned fundamental principle of your constitution, a correspondent method of classification and nomenclature, is a natural, not to say an inseparable, accompaniment and instrument. But, to the gentlemen in question, even without, still more with, this accompaniment, a *rationale* would have been a bridle: and, as I have so often had occasion to say, gentlemen did not want a bridle: no man in their situation does. *Natural* and *rational* are attributes, by which, with incontestible, and even with exclusive propriety, a method thus deduced and accompanied, may assuredly stand designated. This natural and rational method—apply it to the penal code, you will in so doing have gone the greatest part of the way, towards the applying it to the two others. According to the abovementioned fundamental principle, *offences* is the name given in common to all acts, which, being regarded as productive of a balance on the side of mischief, are taken for the subjects of prohibition and thence of punishment. Mischief is, by the amount of it, a defalcation made from the greatest happiness of the greatest number: and to be real, it must, as above-noticed, consist exclusively either of pain in some determinate shape, or of loss of pleasure in some determinate shape: and in both its forms, or else it will not be prevented in *act*, it must, as above, throughout the whole of the field be opposed while as yet but in *tendency:*

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opposed, and to a considerable extent by means of punishment.

According to this principle, offences there can be none, but what are offences against individuals:—acts which, in act or in tendency, are productive of mischief, in this or that determinate shape, to individuals: to individuals—meaning rational beings: to which, if it be agreeable to you to add to a certain extent irrational ones, I would with pleasure, so they be sensitive ones, join with you, (as we have begun to do in England,) were it only for the sake of rational ones. To these, I am perfectly ready to add the Almighty Being, the very instant you have shown me that he is susceptible of pain or loss of pleasure through human agency, and at the same time unable to afford sufficient protection and security to himself. So likewise, but always under the same condition, to fictitious entities: such as *religion*, *order*, *good order*, "*political order*," "*public order*," or as many other *orders* as gentlemen please: in short, (but always under the same condition,) to fictitious entities, of any other sort, and in any number, that they please.

In act, or, in a distinctly perceptible and assignable way in tendency, every act, if fit to be, by means of punishment, erected into an *offence*, and thus placed upon the list of punishable offences, must, according to the above principle, be an offence against an individual or individuals:—an act productive of mischief, as above, to an individual or individuals. But, at the time of committing the act, these individuals may either be assignable or unassignable: when unassignable, they may be either comprised or not within a class less extensive than the class composed of the whole community—for instance, a class constituted by professional occupation, or a class constituted by vicinity of residence. And thus you have the three first and all-comprehensive divisions of offences: namely, I. Private offences—offences, the mischief of which applies to assignable individuals: II. Semi-public offences—offences, the mischief of which is in its range confined to such unassignable individuals as are comprehended within a particular class. III. Public offences—offences, the mischief of which extends in tendency to all the individuals, to all without exception or limitation, of whom the whole community is composed. (Note, that in an offence of a semi-public or public character, a private offence will frequently be included.)

Looking now to offences against individuals, you will find them distinguishable into offences against *person*, offences against *reputation*, offences against *property*, and offences against *condition in life*: and if, to any individual, mischief be done in any shape, you will, I believe, Sir, find it comprehendible under one or other of those divisions. Offences against *person*, you will find a convenience in distinguishing into offences injurious to *body*, and offences injurious to *mind*: not that *body* and *mind* are ever seen walking—the one one way, the other the other;—nor that pain or loss of pleasure can affect the body without affecting the mind:—but that in some cases the mischief will have its seat in the body only, from thence affecting the mind; while in others it will have its seat only in the mind. Looking to offences against reputation, you will (I must confess) see in reputation nothing more than a fictitious entity. But the adoption of it was found necessary, for the giving an intelligible and familiar appellation to a class of mischievous acts, which could not otherwise have been distinctly designated: and as this reputation is the reputation of a man, and a man is a real entity, you are not by this denomination put in danger of being sent in chase of clouds or shadows, as in those other cases: and, though of the mischief done to a man's reputation, the seat cannot be elsewhere than either in his body or his mind, nor commonly very distinctly perceptible elsewhere than in his mind.—yet, for the reason just mentioned, you will, I believe, find a convenience in distinguishing it from all other offences, the mischief of which has its seat in the mind.

Looking at offences against *property*,—in property, if all the shapes into which it has been commonly cast are to be comprised, you will see objects, for the declaration or conception of which, you will not find it possible to speak, or even think, without making use of the fictitious entities, which, on this occasion, in such abundant variety, the authors of language have been under the necessity of creating for the purposes of discourse: you will see—not only real entities—things styled *immoveable*, relatively immoveable portions of our ever-moving planet—and those other real entities styled things *moveable*,—but the fictitious entities styled services, and rights of way, and rents, and tolls, and annuities and so forth, without end. But still, by no such fictitious entities, Sir, will you be put in any danger of being led away, from the consideration of the real and only really existing mischief—pain or loss of pleasure, of body or mind, or both—the only really existing mischief, that can be occasioned, or be in a way to be occasioned, to one or more of the really existing and human beings, whose good fortune it is to have you for their representative; and who, in a shape so honourable to you, have a sort of *property* in your *services*, in the very best shape in which it is in your power to render them.

Looking to offences against *condition*, you will find the like necessity, and thence the like justification, for the nominal existence given to *this* fictitious entity: for, though to a man's condition in life you will find that no mischief can be done, by any act, any otherwise than through the medium of his property, or in some shape or other of his reputation, or of both, (for of the shapes in which *property* has place, property in human *service*, dependent in many

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instances in no small degree on reputation, is one,)—nor then, without producing pain or loss of pleasure, to body or mind, or both,—yet here, as before, you will find, in but too great abundance, acts, the effects of which, may with truth be said to be mischievous to a man in respect of his *condition in life*, but which, at the same time, having or not having their seat in the mind, could not be said to be mischievous to him in respect of *property* in any particular shape, or in respect of *reputation* alone: though perhaps they are so at the same time in respect of reputation, and in respect of property in a variety of shapes: the case being, that, on account of some peculiarities in the nature of the mischief, or in the manner in which it is produced, it requires to be distinguished by a separate denomination from the aggregate stock of the offences comprehended in the before-mentioned denominations.

Take for examples, *conditions genealogical*, such as the pair of correlative conditions belonging to *husband* and *wife;* together with the several others which, springing out of them, constitute the genealogical tree. Add those other conditions, which, without being genealogical, may be styled *domestic*, such as those of *master* and *servant:* add again those other conditions, which, like the former, are not political, and are still of a private nature, but are not necessarily correlative: I mean those composed of *occupations* of all sorts, other than those of *public functionaries* considered as such: add lastly, conditions *political*, all of them corresponding to, and constituted by, so many modes of *servantship*, as towards the community at large, considered in the character of *master:* of these last, the whole aggregate may be divided into *public* and *semi-public*, as in the case of *offences*.

In all these several cases, the chief value of the condition, in respect of benefit, and in respect of burthen, will be composed of *services:* in so far as the rendering of the services is *obligatory*, the possession of the condition will involve a *right* to the services in question: a sort of *property*, of which those services are the subject-matter: in this case, for example, are the *correlative* conditions above-mentioned: in so far as the rendering of the *services* to which the occupation owes its value is *not* obligatory, the value of it consists mostly of a sort of *chance* for obtaining free services, in exchange for other free services: in this case are the various occupations exercised by workmen and traders of all classes.

In this process, Sir, if your patience has been persevering enough to carry you through with it, you have seen *logic* employed in *classification*, and thereby in *theory:* in payment for this labour, you will now, I hope, have the satisfaction of seeing some good effects producible from it in practice.

In so far as, in a system of penal law, the denominations thus employed, afford, as above, indication of the nature of the mischief, in consideration of which, the acts in question have been placed upon the list of punishable offences; —of the nature of the mischief, and consequently of the existence of mischief in that shape,—in so far as this indication is afforded, every denomination, by which no such indication is afforded, will *mismatch* with them, and, on the part of the acts which it denominates, present a sort of presumptive proof, of want of title to be admitted into the company of the rest. In such a method, every such instructive denomination stands therefore as a sort of security against the admission of any group of acts, in which no determinately mischievous character can be found.

Take away the security, give admittance to acts, by the denominations of which, no such indication is afforded,—put aside the only natural and rational method,—then comes in as above—then comes in, as of course—some unnatural, irrational, and arbitrary one. Then come in, at every turn,—as sinister interest, or interest-begotten prejudice dictates,—acts which, not being productive of mischief to any *such* amount, that the mischief of the least punishment, by which any diminution could be produced in it, would not be still greater,—or even not being productive of mischief to any amount at all,—afford no sufficient warrant for the application of punishment. For the designation of these same innoxious acts,—since, by the supposition, no apt word, expressive of mischief in any shape, as being produced by them is to be found,—the words employed are such as are designative of this or that vague generality to which every man feels himself at liberty to attach whatever interpretation best suits his views: every man, and in particular every man who has it in his power, to give to his own interpretation the desired effect. Of these convenient generalities, Sir, would you see an example? Examples more than one—examples sufficient for illustration —may be seen in the system of classification and designation employed by the Committee. Witness Title I. Offences against *political order:* Title III. Offences against *public order:* Title VII. Offences against *buonas costumbres*, which, I presume, is a translation given to the Latin phrase *bonos mores;* and which, I infer from the use thus made of it, is in Spain become familiar to unlearned ears. In English, *good customs*—the literal translation of the Spanish words taken in their separate sense, would not serve:—offences against *good customs*—would not pass: still less would *good manners*—another of the literal translations of the two Latin words: In a boarding school, yes: but, in a penal Code, offences against *good manners* would not pass. To an English ear, by neither of these phrases would a sufficiently plausible pretence be afforded for *penal visitation:* —to use a recently invented, religiously and hypocritically cruel, rhetorical phrase.

Accordingly, when, for the affording, by political power, a gratification to this or that

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personal or individual antipathy, a formulary is wanted, the Latin phrase—*bonos mores*, by which the obnoxious act is enveloped in a cloud of convenient mystery,—offers a formulary, the suitableness of which has been proved by experience.

As to the phrase *offences against good customs*, it carries upon the face of it an objection against itself. Because A and B chose to do a thing, why lay hold on C who does not chose to do it, and punish him for not doing it? And so in case of omission or forbearance. What ground can the mere exercise of liberty by one man, or any number of men, afford, for imposing obligation on any other?

Of this, and of every other objection, but that of meaning nothing, and thence anything, —anything which it may suit the purpose of tyranny to make it mean, the word *order* stands altogether clear. Allow to the legislator the unlimited use and application of but this one word, nothing more is wanted to fit him out in the completest manner in the character of a despot, and that despot a tyrannical one. The acts which draw down upon innocent men the vengeance of the most atrocious tyrants upon record, can there have been any one of them that was not an offence against *order*? against the *order*, established by the tyrant by whom the man was punished for them? Tiberius, Nero, Domitian, Commodus, Caracalla, Charles the Ninth of France, Lewis the Fourteenth of France, Philip the Second of your own country and Belgium—Philip the Second, not to come down any lower—in the word *order*, had not they, for punishing every one of those whom it was their pleasure to punish, as good a warrant, as gentlemen have given themselves by the use made of this word in their Code?

By the word *good*, when prefixed, as it sometimes is, to the word *order*, intimation of something like a reference to public opinion seems conveyed. But, not even this little softening would gentlemen vouchsafe to apply to the despotism it proclaims.

Let me not, Sir, be misconceived. What I do *not* mean to say is—that among the acts, to which a title is given by them with the word *order* in it, there are not *any* to which it is fit that the character of punishable offences should be given; on the contrary, there are perhaps not many, to which, if it depended upon me, I myself should not give that character. All I mean to say is—that if an act's being an offence against *order* is admitted as a sufficient warrant for placing it on the list of punishable acts, the consequence will be—that, along with acts affording a fit demand for punishment, others that afford no such demand may in any number be slipt into the list with little difficulty.

By a natural and rational method as above described, not only is a *bar* opposed to acts that are *not* mischievous, but so likewise is a *thread* afforded for the investigation and finding out of such as *are*.

In a method, thus formed by the application which, on each occasion, is made, of one and the same simple principle,—in every such method, by the relation which every offence bears to every other and to the whole catalogue of offences, you are no less naturally led to the discovery of undue omissions, than to that of undue insertions. In a catalogue of offences, in the formation of which no such instrument of indication has been employed, there may be gaps to any amount unfilled: to any extent, modifications, of maleficence, to which no penal bar has been opposed: deficiences ever so numerous and so extensive, and yet no indication of them afforded.

And as it is in regard to offences themselves, so is it in regard to other extensive objects, for the application of which a demand is created by the catalogue of offences. Witness causes of satisfaction for injury, causes of justification, aggravation, extenuation: causes for pardon, total and partial, formal and virtual.

Thus, not only in a direct way, by the application made of it to each particular case, but in an additional way by means of the method to which it gives birth, does the principle of the greatest happiness of the greatest number, cover the whole field of legislation with its salutary influence. By a method deduced from this principle, a bar is in every part opposed to the introduction of arbitrary arrangements in any shape, a thread afforded for the investigation and introduction of suitable ones, and in every part information given of the design pursued throughout the whole, and of the relation which each part bears to every other. By no mode of arrangement, not deduced from that all-vivifying and all-directing principle, can any such satisfaction be afforded. In every part, you see groups of offences, for the insertion of which no reason is visible: in the whole, you see a receptacle, into which, for the purpose of giving to them this disastrous effect, acts of any description—acts the most purely innocent—may with equal propriety, for anything that appears, be inserted.

No, Sir: without a good *method* for your penal Code, no good penal Code can you have: without a *rationale*, deduced from the fundamental principle of your Constitutional Code —greatest happiness of greatest number,—no good method can you have.

Gentlemen saw before them a method, of which the principle of the greatest happiness of the greatest number—the polar star of your and their Constitutional Code—was the object of actual and perpetual observation. Why would not they employ it? The answer is obvious, and but too uncontrovertible: Because it would not suit their purposes.

4. *Example fourth and last.* All Spaniards put under martial law.

In the Preliminary Discourse, (p. xviii.) "th ejurisdiction of the military courts continues," they say, "on their plan, confined to military offences:" that is to say (so they add

by way of explanation) "to infraction and transgression of military discipline and *ordenanza*," in English, *order* or *ordinances*, I cannot absolutely take upon me to say which. For a promise, satisfactory enough this promise. But how is it performed? Answer. By placing the civil authorities in subordination to the military: and in particular, by making military men, in so far as it shall please them to come into conflict with non-military men, judges in their own cause.

There, Sir, you see the position. Now for proof.

Turning to Preliminary Title, Chapter xiii. Articles 187, 188, I find as follows—

"Reserved equally (*igualmente*) for the military authority and jurisdiction, in quality of military offences, are the following:—"

"Firstly: acts of disrespect (*los desacatos*) or violence, committed by *any person whatsoever*, against military men who are found" (*que se hallen*) (meaning it is hoped *only at the time of their being occupied*) "in an armed state in military service." Without this limitation in point of time—a limitation which, under this wording, a judge may apply or not apply as he feels disposed—*any person* whatsoever may be punished in a *military manner* by a *military man* for *any act* deemed by him an act of *disrespect* towards a military man.

"Secondly: those" (offences) "which are committed in like manner" (*tambien*) "by *any person whatsoever*, either within the *quarters*, riding-schools, magazines, and other military edifices, or to the damage of any *effects* which are therein kept."

"Thirdly: acts committed by any person whatsoever in aid of a foreign enemy."

By this third clause, compared with Title ii. Chapter i. articles from 252 to 261, a fair sparring match might seem to be set on foot, between judicatories military and civil, on this part of the field. But, as the hands of the civilians (it has been or will be seen) are tied behind them, no mutual bruises need be apprehended.

Now, then, Sir—on any account whatever, —by behaviour ever so bad, or by behaviour ever so meritorious,—suppose a non-military man to have rendered himself obnoxious, to a man, or to a certain body of men, in the military service. Under the second clause, if by any means they can contrive to get him, at any time, within their "*quarters*," (whatever may be their "*quarters*,") or when they are upon a *march*, or in short upon *duty*, anywhere,—what is the injury it will not be in their power, in virtue of this article, to inflict on him, and without possibility of redress?—But no: they need not be at any such trouble. Let him be where he will, they have but to pick a quarrel with him—to bestow on him any such treatment, as may have the effect of drawing from him words of a "*disrespectful*" nature, he is thereby placed at their disposal.

A judge upon the bench—suppose an occasion to present itself, in which it may appear to him matter of duty, to express, in relation to the conduct of any man of the military order, any such sentiment of disapprobation as a judicatory composed of men of that same order shall be pleased to regard as being expressive of *disrespect*: this judge, if he be a *person* (*persona*)—this judge—though he be of the highest order of judges, nay the minister of justice himself,—is he not, Sir, by this article, placed no less absolutely at their mercy than the meanest citizen?

In all these several cases, not only is the judicatory to be military; the punishment is to be so likewise. The association is formed by *igualmente*:—one of the instruments of entanglement, which the genius of confusion, under the guise of the genius of eloquence, has contrived to put into gentlemen's hands.

By this instrument it is—by their *igualmente* —lodged as it is in article 188—by this it is that, ere we can obtain an adequate comprehension of what is done by this same article 188, we are made to go back to article 187: in which article the first word I see is a *tambien*, by which I am sent further back to the two first articles of the same 13th chapter, namely, articles 185 and 186; which same article 186 has nothing to do with the subject, being confined to ecclesiastical persons and ecclesiastical offences: for this same article 185, conceived as it is in general terms, seems to be inserted by way of ornament, the general terms not adding, as far as I can perceive, anything to the mass of the more particular arrangements which follow it.

Of the words which the *also*—*Tambien* (or in like manner) in article 187, serve to introduce,—the following, in so far as my interpretation of them is correct, is a translation as literal as possible. "Reserved to the military authority and jurisdiction is the cognizance and *chastisement* (*castigo*) of the *offences* (*delitos, culpas y faltas*)* which, "contrary to their discipline

* To these words, meant all of them to designate so many species of the genus *offence*,—to these words, to give the equivalent in English words, is not possible. The intention of them seems to be, to designate three degrees of criminality: in general, the highest standing first. But this distinction has nothing to do with the nature of the offence: it takes that offence for the greatest, to which it has been the pleasure of the despot to attach the greatest punishment. This was the distinction established by Napoleon. In the climax established in his penal Code, you have *contravention*, *delit*, *crime*. Of this order, that which is here in view in your proposed Spanish Code seems to be the reverse. By the word *culpas*, I was led to suspect the distinction to have been borrowed from the Roman law. But, though the *ideas* seem so to be in both instances, in one of them the *word* is not. The word *culpas* corresponds indeed to the Roman *culpa*: but the word *delitos* does not correspond to the Roman *dolus*: which word—(a word that, considering its meaning in the ordinary language, namely *deceit*, was miserably ill-chosen by the

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respectively, military persons commit." In the word *castigo*, may be seen the demand created for the reference thus made from the 188th to this same 187th article: for, thus it appears, that, by this word as inserted in 187, and, by the word *igualmente* in article 188 applied to and ingrafted upon this same article 188,—not only is the judicatory, by which persons not military are in these cases to be tried, appointed to be a military judicatory, but, as I set out with saying, the punishments which they are to suffer, are appointed to be military punishments.

Note that, by being thus subjected to the military authority as exercised by courts martial, the civil Judges of all classes are subjected to the arbitrary power of the monarch. For, in the Constitutional Code, by article 171, number the 8th, to the monarch it belongs to command the army and navy, and to appoint the generals and admirals: under which provision must be understood to be comprehended, (though forgotten to be expressed,) the removal of them, or else I do not understand how the command given to him over them can be exercised:—if not removeable, a commander in chief, when once appointed, will be absolute.

For this subjection of the civil judicatories to the arbitrary power of the King—for this subjection, thus established in an indirect way, through the medium of his necessarily arbitrary authority over the military judicatories, the constitution and the people would not, it is true, be much the worse, if those same civil authorities were, in a direct way, in a state of equally effectual subjection to that same power. But this is not the case. For, by that same article 171, number 4th, it is not by the king alone that the magistrates (*Magistrados* including I suppose judges) of all the civil and criminal tribunals are to be nominated, but by the king at the presentation of the council of State, in the appointment of the members of which, by articles 233, 234, he has no other share than the choice of the number in question out of thrice the number presented to him by the Cortes. Thus as to *appointment*: and as to *removal*, "magistrates and judges" (says article 252, *judges* being now inserted—for thus are your immutable laws drawn up) "magistrates and judges cannot be deprived of their situations, without cause legally proved, and stated in their sentence: nor suspended, unless in consequence of accusation legally instituted."

Whether, for words deemed wanting in respect applied to a soldier, a court martial shall be pleased to flog or beat the Judges of the supreme court of justice erected under Article 259 of the Constitutional Code, or content themselves with imprisoning them,—regard for the constitution will, I make no doubt, suffice for preventing the military Judge from signing, either a sentence of forfeiture, or so much as an order of suspension in their case. But, by any such regard for the constitution, it does not appear to me, how the mischief, if any, from the subjection of the civil judicial authorities to the arbitrary will of the monarch,—through the medium of his courts-martial, as above,—will be very materially diminished.

Was it by design, Sir, was it by inadvertence, that the sort of arrangement you have seen, was proposed by gentlemen for your adoption? In either case, what say you to it! In either case, at the elections before the next Cortes but one, what will their constituents say to it?

Nothing of professional or other prejudice—nothing of exaggeration, Sir,—need you fear in me. Knowing something of your non-military judicatories in so far as they are upon the Roman models—knowing something of these and next to nothing of your military ones,—for the present, and until your judicial establishment, and system of judicial procedure, have been put upon a footing very different from that in which I understand them to stand at present,—supposing professional sympathies and antipathies out of the question, I have more confidence in the military than in the non-military ones. Why? Because the military ones have at any rate this distinguishing character in their favour, so at least I take for granted, namely, that by delay, vexation, and factitious expense, they have nothing to gain, while the non-military ones have everything to gain. To real justice,—not only among us, as far as little less than sixty years of pretty close attention has enabled me to judge, but among you, as far as depends either upon the system of procedure or the ordinary dispositions of the judge,—to real justice the citizen has, I should expect to find, a better chance in a military judicatory, than in the highest ordinary judicatory that is not military. If I have

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lawyer tribe) so far as in their language it means anything, means *criminal consciousness*, their *culpa* meaning *temerity* pure from criminal consciousness: a distinction piteously ill-adapted to the denoting of different classes of misdeeds, it being applicable alike to all classes. In gentlemen's proposed Code, the first chapter, consisting of one article, has for its title, *De los delitos y culpas:* neither in the title, nor in the body of the article, is there any such word as *faltas:* Of *delito* a definition is given, whereby the conception, so far as discernible, appears to correspond with that of *criminal consciousness:* and in like manner *culpa* with *temerity*. To these definitions, such as they are, no reference is made either in the articles here in question, namely, 185, 186, 187, 188, or in any other of the articles in which the words are employed:—words to which meanings are attributed, so different from any that any man can have found attached to them in ordinary discourse. In relation to the first article, the supposition thus proceeded upon, is—that every man carries it at all times in his head. In the instance of the five honourable draughtsmen themselves, or any one of them, can it, Sir, have been a true one?

In articles 189, 190, being the remaining ones of this chapter, I find not only the word *faltas* dropt, but also the word *culpas*. Was this by design, or by inadvertence?

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not been misinformed, in the case of offences of an insurrectionary nature, leaving or not leaving the cognizance of them to be shared by the non-military judicatories, you have, by a recent decree, given the cognizance of them to judicatories of a military cast:—to judicatories, in which, whether the judges be or be not of the military profession, (for I know not which is the case,) the mode of procedure is at any rate military. To me this information, taken according to such conception as I was in a way to form in relation to it, was I confess not unsatisfactory. Now, said I to myself, there seems a probability of a decision: till now there has been no chance. Of this conception, right or wrong, my observations on Judge Hermosa's panegyric on judicial forms and delays, may help to show the grounds.

In the present state of civil judicature,—even to give to military men the cognizance of disputes, on whatever subject, between non-military men and military men, might for aught I can say be an improvement. But, so long as there are judicatures not military, to which the cognizance of causes of any kind continues to be intrusted,—to think of intrusting to military judicatures the cognizance of causes arising out of disputes between non-military men on the one side and military on the other, this is what I must leave to the gentlemen in question, and to the construction put by them upon the Articles relative to the greatest happiness of the greatest number, if the remembrance of it has not dropt altogether out of their minds.

Among the sources of "*controverted points*," this topic relative to judicatories of exception, as you may remember, we have found reckoned: but no ground do I, on this occasion, find for any such supposition, as that the question whether the civil authority should be subject to the military, or the military to the civil, was of the number of these same controverted points. Unanimous, as far as appears, has been the opinion, by which the civil authority is placed, as above, in subjection to the military: the opinion unanimous, and the propriety of it too plainly manifest to stand in any need of support from *reasons*.

Sir, this is going even beyond *us*. Even in our government, military as, under our "best of kings," it is become, non-military men have not yet been delivered up to military judicatories. A servant of the king gives orders for killing us, and we are killed: but should a military man, by whom, without provocation we have been killed, be called to account for it, it would be in some ordinary and non-military judicatory that the account would be rendered, and to some non-military functionary or functionaries that the giving him impunity would be consigned: to the king's attorney-general, by means of an instrument called a *nolle prosequi* or a *nolle prosequi*; to the chancellor with the king's signature, by means of an express pardon, or (what is more commodious) to the judge, by whom the man is tried, by means of a virtual pardon, manufactured out of a quibble:—out of some recondite rule of evidence, or other rule of procedure, which, if it has not yet been made, can at any time be made for the purpose: just as penal law to any extent is, in the name of *common law*, made, every day, by this or that dependent creature of the king in the situation of judge, without putting the legislature to the trouble.

We have priests, to order unarmed and unoffending men, with women and children, to be killed, and ministers with kings at their backs to reward them for so doing: we have posts, by the receipt of which men are entitled to receive sinecures of thousands a-year for such services.

All this may be done, and is done. But what with us remains as yet to be done is—to subject men not military, for offences not military, to be tried, without any such formality as that of jury trial, by a court-martial composed of military officers. Yes, Sir: as yet,—though I cannot take upon me to promise how long it will continue so,—as yet for an offence not military, be it what it may,—and be the individual specially injured, if there be one, who he may,—a military man, be he who he may, may be tried, and is tried, by a judicatory not military: no non-military man is, for any offence, be it what it may, tried by a military judicatory.

Though you must have quitted Paris,—taking for granted that you have given directions for the transmission of my letters,—not having been forbidden, I give them and shall continue to give them the same direction as before.

One observation or two more, before I quit the subject of *method* altogether.

In different places of the proposed Code, I see a number of articles, encumbered, each of them, with a clause, by which, where the offender is a public functionary, an *ultrà* punishment is added. Witness Articles 202, 203, 204, 206, 207, 213, 214: and in short such seems to be the method pursued throughout: also a separate clause to the like effect applying to ecclesiastics; as if an ecclesiastic, as such, were not a *public "functionary."* But perhaps that title was regarded as not belonging to *Monks* or *Sinecurists*: and, in the apprehensions in which the punishments originated, foreign ecclesiastics, not beneficed in Spain, would naturally be included.

Various are the inconveniences resulting from this practice:—by it, the conception and memory, of individuals at large, is burthened with matter with which they have no concern: the bulk of the whole receives a useless increase: and, by a want of uniformity and correctness in the mode of expression, imperfections, too various to be here brought to view, are liable to be produced.

In another part of this same Code, I see a compartment, by the consistent and comprehensive use of which the inconvenience might at any rate have been lessened. I mean—in Part I, Title vi., containing, in 12 chapters, Ar-

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ticles 76, namely, from 493 to 528. It is headed —"*Of Offences of Public Functionaries in the exercise of their duties.*" Offences, namely, *delitos y culpas : faltas* being, on this occasion, as on the one above noticed, omitted. Here then is a place, into which the matter relative to public functionaries, as above, should naturally have had admission: at any rate, supposing the words "*in the exercise of their duties,*" omitted: as they might have been without inconvenience. Unhappily, there is no reference from either of these places to the other: the consequence is—that,—ere he can be assured of his having information of the whole of the burthen, for ignorance of which, or any part of it, he is exposed to be punished, in many perhaps most instances by loss of office,—a public functionary must have hunted through the whole Code.

By the title thus given to that division of the Code, is not a presumption, Sir, afforded, that, by the matter of it, information, in some shape or other, was meant to be given, to all the several individuals so denominated, of the whole mass of the obligations respectively imposed upon them? For, unless it be in proportion as such information is possessed, how is it that, by the community at large, the benefit, expected from the fulfilment of these same obligations, can be received? the afflictive punishments, appointed in proportion to non-fulfilment, be avoided?

But, if so, how happens it, that no reference is there made, to so many other articles, in which other obligations not less serious are imposed upon the same persons? Thus faint are the traces, which in that part the proposed penal Code affords, of any regard for the two characteristic and fundamental articles of the Constitutional Code.

To confront with the method thus exemplified,—allow me, Sir, to submit to you the two short rules, by which the disposition of the matter, in the whole body of the law, has been governed,—in a Code, in the penning of which, that all-illuminating principle has never been for a moment out of sight.

Rule 1. Make known to every man what belongs to him.

Rule 2. Burthen no man with anything that does *not* belong to him.

Would it be agreeable to you, Sir, to see them both in a nutshell? Behold them then in a Latin one. Rule 1, *Suum cuique:* Rule 2, *non suum nulli.*

1. Make known to every man what it belongs to him to know. Functionary or non-functionary, no more would I think of making a man suffer, for non-observance of an article of law, unless it had been put into his hands, having first been cleared of all matter in which he had no concern, than I would think of punishing a child, for the not having performed a lesson that had never been set him. "*No more,*" did I say? I should have said—*much less.* Think, Sir, of the difference as to the penal consequences!

A few observations,—showing, on the one hand, the all-embracing application capable of being made of these two short rules, on the other hand, the aspect borne towards them by this work of your illustrious colleagues,—I know not, Sir, how to forbear troubling you with.

Be the Code what it may, if, of the class to which the individual in question belongs mention is made, he is in point of interest either concerned or not concerned in it: if concerned, he is so either in quality of *party burthened,* or in quality of *party favoured,* or in both qualities.

Taking into mind the entire mass of the matter of law, including not only that portion which at the time in question happens to be actually in existence, but also whatsoever other matter there be, a demand for which may eventually come to be found to have place,—in a word, taking into mind the whole body of the law *actual* and *desirable* together,—let a man consider it with reference to the number and description of the persons affected in point of interest by the several distinguishable parts of it, he will find it, according to a principle of division, at once natural and all-comprehensive, divisible into the *general Code,* and the system or assemblage of *particular Codes.*

In the general Code,—saving a few exceptions, which on inspection will be obvious to every eye,—the two opposite and correlative situations of *party benefited* and *party burthened* will be seen to belong alike to every member of the community: in so far as protection is afforded him from mischief at large, and in particular from whatever mischief he stands exposed to suffer from the effects of mischievous acts on the part of other men, the situation a man occupies is that of *party benefited:* in so far as coercion, whether in the shape of restraint or constraint, is imposed upon him,—whether for the purpose of preventing him from being an instrument of mischief, or causing him to be an instrument of good, to other men,—or for any other purposes, all manner of bad purposes included,—the situation he occupies is that of *party burthened.* To the extent therefore of the whole field of the general Code, every man has this double interest in being acquainted with the matter of it: this double cause, for wishing to be acquainted with it. In any particular part of it, according to circumstances, it may be in the one or the other capacity, that the interest he thus has in being acquainted with it is greatest.

In the system of particular Codes, may be seen that one of the two great masses, which in this respect presents the greatest differences.

Persons taxed, &c., public functionaries, and *parties to contracts*—by these denominations are brought to view the three most extensive classes of persons, who, in the situation of parties specially burthened, have respectively an interest in the matter of this or that Code belonging to the system of *particular Codes.*

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. *Persons taxed*, &c. By this I mean the sons of various classes, that of public functionaries not excepted, on whom, for the benefit the community at large, or of this or that tion of it, the obligation of rendering *service*, the shape of payment of *money*, or any other pe, is imposed.

In the particular Codes, by which taxes are posed, for the use of the community at large, several persons on whom respectively the tribution in its several shapes is imposed—se, commonly with the addition of others, whom, on each several occasion, it happens be in some way or other respectively conected with them,—are *the parties* thus speally *burthened*: the party *benefited* being, as st mentioned, the community at large. Where, stead of the community at large, the party nefited is either a particular class, or a parcular individual,—his description receives the anges thus indicated.

To impose a tax, &c., is to impose the obliation of rendering to a party of this or that scription as above, *service* in this or that ape: and of *service*, the simplest and most omprehensive shape is that which consists in e transfer of *money*.

In this one group will be comprehended, it evident, a numerous and ever variable multitude of particular Codes, in each of which, in he character of party burthened, a class more r less numerous of individuals will find itself nterested: and, in the instance of each indiidual, there will be an assemblage of Codes, nore or less numerous, and ever variable, in which he will find himself to have an interest.

II. *Public Functionaries*. In a particular Code, in which anything is ordained that bears upon the situation of a public functionary, or a class of public functionaries, as such,—the functionary, in respect of any obligations imposed upon him, is the party *specially burthened*: if, in return for the services expected at his hands, the matter of reward in any shape is placed within his reach, he is in so far a party *specially favoured*. If, to enable him to fulfil any *obligation* imposed upon him, or in a word any service expected at his hands, *power* in any shape is conferred on him,—he is, in that character also, a party specially *favoured*. In respect of the reward, he may be said to be not only specially *favoured*, but moreover specially *benefited*: not so in the case of the power, if considered as charged with the obligation, and not accompanied with the reward. But note, that in many shapes, in many eyes, the power, though not accompanied with any distinct reward, and notwithstanding every obligation it is charged with, has the effect of reward.

Unless it be in the case of a monarchy,—concomitant to power in every shape, is, or is supposed to be, obligation in the correspondent shape—obligation to direct the exercise of the power to the rendering of the services, by which the function is characterized.

III. *Persons engaged in contracts*. In the case of a contract, the same person has place in the two opposite and correspondent characters: namely, that of party benefited as well as favoured, and that of party burthened. In the benefit expected from it, each party sees the *inducement*, by which he was led to take upon himself the burthen: and, unless in his eyes the benefit from the transaction had at the time been greater than the burthen, he would not have engaged in it.

Of the several *conditions in life*, the two most important and most extensively entered into—namely, that of *husband and wife*, and that of *master and servant*, are respectively the result of a correspondent contract. In the case of father and child, the two opposite and correspondent conditions,—though not constituted by a contract, to which the persons so related were both of them parties,—derive their existence from contract, namely that to which the two parents were parties, and in which the child was eventually among the subject-matters of it.

That on the one hand the burthen upon the conception and the memory, on the other hand the burthen upon the purse, may be as endurable as possible, in the giving expression to this matter of the body of the law, repetition will of course be to be avoided as much as possible. If—in every particular Code headed by the name of the class it belongs to, not only the whole of the matter in respect of which a man belonging to that class is party benefited, but the whole of the matter in which he is party burthened, were inserted at length,—no small portion would thus be to be printed twice over: and the burthen, as well upon the purse as upon the conception and the memory, would, in a proportion more or less considerable, be increased. In the instance of every particular class of persons,—in the Code, the matter of which belongs to that class, and on that account will require to be denominated from it,—in respect of some part of that matter, the individuals belonging to that class will be parties specially *benefited*, or at any rate parties specially *favoured*; in respect of other parts, parties *bound*. In whichever of the two characters a person is concerned, it is alike requisite, that information of the concern he has in it should be in his hand. In the Code denominated from the class to which he belongs, all such information must accordingly in some shape or other be contained: but, in that same Code, what part shall be inserted at length, what part no otherwise than by reference to the Code or Codes, denominated from this or that other class concerned in that same matter in a manner which is correspondent and opposite,—will depend upon particular convenience, as indicated by particular circumstances. Note on this occasion, that by one and the same group of legislative arrangements by which the man of but *one* class is a party burthened, men of *divers* other classes may be parties benefited: and so *vice versâ*.

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In the case of a member of the *judicial establishment*, may be seen that of a public functionary, who, together with the power, being charged with the obligation of contributing, according to the nature and extent of his jurisdiction, to the giving execution and effect to the whole body of the law, or to this or that part of it, is therefore,—not only in a general way in his quality of member of the community, at once *party benefited* and *party bound* with relation to the whole matter of the general Code,—but likewise, with relation to the whole of the matter of the system of particular Codes, specially *favoured* in respect of the above-mentioned power, and specially *burthened*: burthened with the obligation of eventually giving execution and effect to it, and to that end, of lodging and keeping in his mind the import of it.

Only in proportion as it is known, can the law or any part of it, be an instrument of good in any shape. But,—with every degree of compression that can be given to it,—the difficulty, of giving to the knowledge of it this necessary extent, cannot be inconsiderable. Any expedient, which promises to contribute in any degree to the lessening of this difficulty —ought it, Sir, to be left unemployed?—Of some of these expedients, I proceed to submit to you, Sir, a faint sketch.

I. Laws of *constant* concernment—laws of *incidental* and *contingent* concernment:—by the distinction thus expressed, one instrument for the diminution of the burthen upon the conception and the memory, may be brought to view. In the case of a law of *incidental* concernment,—if the case be such, that the demand for attention to it will not be presented, till after a certain state of things has taken place,—a state of things, notice of which *cannot fail* of being received by the parties, who, whether it be in the character of party burthened or party benefited, are parties concerned,—a consequence is—that of this part of the Code, be it the general, be it any particular one, the expression at length need *not* be given in every edition of this same Code: by indication, given in the way of reference, to a more enlarged edition in which the part in question is given at length, the purpose of conducting the mind to it will be answered: and, in the case of no individual, with reference to whom this state of things never does take place, will the Code, out of which the matter in question is omitted, be incomplete.

First instrument of reduction or compression as above—distinction between articles of *constant* concernment and articles of *incidental* and contingent concernment. This distinction applies alike to the general Codes and to the system of particular Codes.

II. Second instrument of reduction or compression—distinction between *main text*, *expository matter*, and *rationale*.* On my plan, the matter of each of the three Codes—penal, civil, and constitutional, is divided into general titles and particular titles:—or into particular titles and general titles: for it is not as yet altogether clear, which of the two orders will in each instance be most convenient. Take, for example, the penal Code. In the particular titles the main text is composed principally of the denominations given to the several offences: denominations, followed each of them by a definition, and coupled with intimation given, of the punishments respectively attached to those offences. In some cases to the name of a genus of offence thus marked out, may be added—added in form,—other more particular denominations, declared to be indicative of so many species of acts contained under that genus. Be this as it may, by every distinguishable portion of the expository matter, designation will be made, of some particular species of act contained within that same *genus*: made by the very nature of the case, whether mentioned or not mentioned as being made.

Compared with the bulk of the whole, the bulk of the main text will lie in a very narrow compass. The particulars, contained in the expository matter, are employed in giving clearness and precision to the import of the name of the offence, and of the definition given of it. When, of this expository matter, a conception has once been obtained,—it will thenceforward, with more or less clearness, correctness, or completeness, be suggested by the name alone; still more effectually by the name with the definition added to it: and, the more completely this effect is produced, the more effectually will the main text answer the intended purpose, when the expository matter is detached from it.

So likewise as to the *rationale*. The use of the definition is—to distinguish the offence defined, from all objects with which it is likely to be confounded: in the first place, from all acts to which punishment is not meant to be attached in *any* shape—in the next place, from acts, in respect of which, for the purpose of punishment or any other purposes, arrangements in any way different are meant to be made. Take, for example the offence of *theft*. Neither in the Roman nor in the English law, —neither by any definition that has ever been given either in the way of statute law, or in the way of common law,—nor by any lights afforded by reports of judicial decisions,—has any clear line been ever drawn, between a non-criminal taking, namely, on the supposition of *right* to do so, on the one hand,—and the taking by means of consent obtained by *fraud*, on the other. The expository matter will, in its own way, contribute to fix in the memory, when once let in by the conception, the idea of the true character of the offence: the rationale will, in another way, contribute to the same desirable end. But, moreover conversely, the effect of the association being mutual,—proportioned to the clearness, correctness, and

* See the Constitutional Code, in vol. ix. of this collection.—*Ed.*

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completeness, of the view which these instruments of elucidation have given of the object, as designated by its denomination and its definition,—will be the facility, with which, upon every occasion, the import, of these same instruments respectively, will be recalled: recalled, by the denomination and definition together, or even by the denomination alone.

In this way, Sir, in my penal Code, you see three distinguishable parts, contained under the head of each genus of offence: the second and third,—each in its own way, throwing light upon the first, and thus forming a useful accompaniment to it,—but each of them capable of being detached from it. On this plan, in so far as there may be any use in separating them, nothing can be more easy: every printer will be competent to it. If there *be* any such use, it will be in the way of lessening the burthen: the burthen, whether it be on the conception, the memory, the pocket, or the shelf: not to speak of the pocket in the literal sense.

Of both *expository matter* and *rationale*, particular samples may be seen, in the first of those works of mine that have been edited in French by M. Dumont.* You will assuredly neither expect nor wish, Sir, to see anything of either of them here. What the relation may be, between what is said there on the subject and what I have said here, I know not. Neither eyes nor time will admit of my looking at it.

Other instruments of compression I employ: But, by any attempt to convey any conception of them here, I know not what further addition might be required, to a load which perhaps may already have been put aside as unsupportable.

You see already, that either the main text alone, or the main text with the expository matter, may be considered as an *abridgment* of the whole. Here then you see a sort of abridgment of the legislator's work: an abridgment made by the legislator himself. On this occasion, permit me, Sir, to observe, that the legislator's is the only hand, by which an abridgment can be made, on which any dependence can be placed with safety—can be placed without imprudence. Let the work at large be ever so replete with imperfections,—an abridgment, in which those imperfections were removed, would, to him who trusted to it, be no less mischievous, than one, in which the multitude of the imperfections had in the same proportion received increase. How can it be otherwise? In case of litigation,—not by the abridgment good or bad—not by the abridgment, but by the authentic work at large,—will the lot of the parties litigant be determined.

Thus in case of statute law. As to common law—in this case, an abridgment is an imagination of an imagination.

In either case, in what character is an abridgment capable of being of use? Only, Sir, in that of an *index:* an index, for giving information, of the places in which may be found those portions of discourse, by reference to which the fate of the cause, and thence of the parties, will be determined: an *index*—differing no otherwise, from the sort of implement more usually designated by this name, than by being more ample, and cast into a logical form instead of the alphabetical.

In the rules *suum cuique* and *non suum nulli* is included, you see, Sir, this instruction to the legislator.—So order matters, that, in addition to the general Code in which *all* have a concern, each one shall have—have actually in his hands—every particular Code in which *he* has any concern: and *that* in a state separate from every particular Code in which he has *not* any concern.

The all-comprehensive survey, thus and for this purpose taken of the field of legislation—the division thereupon made of the rule of action into general Code and system of particular Codes—was there no use in it, Sir? Was it mere theory? had it no bearing upon practice? no influence on the greatest happiness of the greatest number? To the gentlemen in question—was it unknown, Sir? No, Sir, it was not, it could not be, unknown to them: it stared them in the face: it stared so strongly that they shut their eyes against it. It came from the intrusive foreigner: it was not of *their* starting: it would have given them too much trouble:—in a word, it suited not their purpose. It was put aside accordingly. There, Sir, you see the cause.—No such thing was to be found in any of the most accredited Codes:—there, Sir, you see a pretence.

Such is the omission. Now for one little example of the consequences.

On my plan, under the head of *Husband and Wife*, in a particular Code so denominated, a document, in which all benefits and all burthens, attached by law to those two correlative conditions, are set forth, would be found. If it depended upon me,—on entrance into that contract, into the hand of every man and that of every woman, should a copy of it be placed, or no such contract should be entered into: if some time before the ceremony, so much the better. They would then enter into the engagement with their eyes open, and not as at present, blindfold. An instrument of this sort—would it be less instructive, less useful than a ring? But rings were made before Codes were made: before Codes were made, or the press for the printing of them invented. But moreover, from the relations between husband and wife come eventually those between father and child: of the particular Code intituled *Law of father and child*, notice would accordingly be given in the particular Code intituled *Law of husband and wife:* with or without intimation, more or less particular, of the details.

In the Committee's proposed Code, arrangements relative to this pair of correlative conditions, have place. Under what head? Under that of "Offences against *buenas costum-*

* See in this collection, vol. i. p. 164.

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bres:" Articles 559, 560, 561, 562: offences against *good morals* or *good customs*. But, on or before entrance into this engagement,—what man, what woman, should this same Code pass, would think of buying a copy of it, and reading it? Even if they did set about reading it, would not they, to save trouble, be apt to glance over the titles? Glancing over the titles, would they see any one of them, in which either the word *husband* or the word *wife* is mentioned? Not seeing any such title, but seeing the title *offences against buenas costumbres*, would they be led by it, to expect to find in it anything that they would have more concern in after their marriage than they had before?

One little example more.—Knowing that, in the Code in question, there is a compartment, in the title of which *functionaries* in general are mentioned,—every man, to whom that denomination belongs, will of course understand, that in some way or other he can scarcely fail to have a personal interest, in making himself acquainted with the contents.

But, from any such title as that of *offences against the liberty of the nation*, what is there that should lead him to make any such inference?

In the Committee's proposed Code, I see a division thus intituled—" Of the offences," (*delitos y culpas*,) " of public functionaries in the exercise of their offices:"—Chapters xii.; pages 23, from 132 to 155 inclusive; articles 76, from 453 to 528 inclusive. After so much said on the subject under its own name,—who, without notice given, would expect to see anything more about it under any other name? Yet, under other names, more there is in abundance,—and no warning given of it: and, in particular, under that of *offences against the liberty of the nation*, as above.

Whatsoever be the benefits, undertaken to be conferred on a man by any part of the law—whatsoever be the burthens imposed upon him by force of punishment,—do gentlemen know of any means a man has of making himself secure,—secure, either of enjoying the benefit or of escaping from the punishment,—without reference made to the law? Wherefore then did they decline taking the measure necessary for the putting this saving knowledge within every man's power? Wherefore?—but that—either absolutely, or in comparison with some nearer object,—the greatest happiness of the greatest number was, in their eyes, an object of indifference.

Giving to a man this double security—giving to *every* human being that could read it, or hear it read, this double security—giving to the whole body of the law all this efficiency—a service such as this, would it, Sir, be a service without value? This service, the intrusive foreigner would have rendered, and would yet render, to your nation. This service, gentlemen would not themselves render, nor would they suffer him to render it.

They are Spaniards: to them it belongs to be apprized of all those circumstances, affecting in each case the demand for legislation, that are peculiar to Spaniards: to them, yes; to him, not.—Be it so, Sir. But, by him who, having complete knowledge, will not make application of it, or by him who, having but incomplete knowledge, would make application of it to the uttermost of his power—by which of the two, with reference to the purpose, whatever it be, is most service likely to be rendered? On the part of the foreigner, the knowledge of the circumstances peculiar to Spain was wanting: relation being had to Spain, imperfections in any work of his would thence have been inevitable. Admitted. But, whatever would have been these imperfections, could there have been, on the part of the gentlemen in question, any want either of the inclination, or of the power, necessary to the correction of them? Thus stood the matter at the first. But, at present, and in future, whatever wisdom it may be, that, in their instance, composes the fruit of this indispensable local knowledge, it is now visible: It is seen in their proposed Code, and all foreigners, as well as all Spaniards, have it before them.

Two rules you have already, Sir, in a nutshell: permit me to slip into it one other such little pair, and I have done.

Rule 3. *Ideis iisdem, verba eadem:*—or thus—*Eadem natura, eadem nomenclatura.* Of this the converse is—Rule 4. *Ideis diversis, verba diversa:* or thus—*Alia natura, alia nomenclatura.* Change the expression, can any one avoid suspecting at least, that the ideas you meant to convey are changed likewise? Supposing it your intention to convey different ideas, could you take any other means than that of using different words? If you could not, then is the use you have made of different words a certificate of diversity in the ideas; and this certificate is a false one. If these rules be conducive to the ends of language, and the opposite course repugnant to the ends of language, try them, Sir, upon the proposed Code: try them throughout upon that great work, and see what will become of it. Of this I have already submitted to you a few exemplifications.

Thus is it, as I have so often had occasion to observe—thus is it, Sir, that in every page the same unfortunate spectacle is but too visible:—knees bent, before the fascinating art of *Rhetoric:* backs turned, upon her formal, but honest, sister, *Logic*. Good this in poets: but is it so in legislators?

Ideis iisdem, verba eadem; ideis diversis, verba diversa—there, Sir, you see two rules of *expression*, two rules for the expression to be given to the matter of the law. *Suum cuique; non suum nulli*—there you have two rules of *distribution:* two rules, for the distribution to be given, to that same matter, on the possession of which, to so vast an extent, the difference between happiness and misery, in the instance of every human being, depends. Proceeding thus, what *Linnæus* did for natural

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history—what *Sauvages* did for the nosological branch of medicine,—that will this your troublesome correspondent do, Sir, for legislation, so far as life and faculties suffice. And already, though it were by nothing more than these four short rules, is not some little progress made?

Lawyers, employed by the ruling few, with or without cognizance taken by a supremely ruling one—lawyers, linked with these their employers by a community of sinister interests—such are the men, by whose particular wills, governed by their particular and thence sinister interests, on this as on every other occasion, as far as has depended upon the state of the law, the condition of the millions has been disposed of. But, with the exception of those violences, from which the danger, to every man's person and property is serious and manifest, their own included,—it is the interest of lawyers, that the multitude of offences in all shapes should be at its maximum,—in such sort as that the profit, from defending the injured against the injurer, and the injurer against the injured, shall be so likewise. Thus it is, that, with the above exception, mischief, in whatever shape produced by ignorance of the law, is by professional draughtsmen viewed with delight: and, it being to their high seated employers matter of indifference, hence it is, that we see it left, upon the footing at which it suits the interest of the lawyer class, that it should everlastingly be kept.

LETTER VI.

On the anxiety of the Legislation Committee to keep the door of the Cortes shut, against works coming into competition with their own. Conditions on which Sanctionment is recommended. [*Necessity of the free tone of these Letters.*]

Sir,—Such, with the exception of the words in brackets, was the title of this my sixth letter as announced in the first. Meantime, the matter itself has undergone no small change. Of the anxiety of the gentlemen in question to keep out of the sight of their colleagues, and thence of their constituents, rival productions in general, and in particular your humble servant's actually existing works, and future contingent Codes, you have already heard more than enough. The anxiety on his part not to be so kept out of sight—this is the only anxiety which, in the course of this letter, will give you any further trouble.

Before I take my leave of theirs altogether, I must however, submit to you, in the way of contrast, a short recapitulatory sketch, of the principal objects, to the accomplishment of which, the opposite anxieties may have been observed directing themselves, and the different arrangements, of which the pursuit of the respective objects has been productive.

1. My object being the greatest happiness of the greatest number—the same which, in articles 4 and 13 of your Constitutional Code, stands proclaimed as the all-comprehensive object of that official work, I have on every occasion held it up to view and made application of it.

Gentlemen's object being—what I will leave to themselves, or some one for them, to state,—they have not, on any occasion, as far as I can see, taken any the smallest notice of it.

2. As one means towards that same end, for the purpose of securing the aptitude of the work in relation to it—namely, in so far as depends upon appropriate moral aptitude on the part of the framers of the first draught, and for that purpose to shut the door against all particular and thence sinister local interest, backed with power sufficient to give effect to it,—I make offer of a foreign hand, secured by its position from all sinister interest.

Gentlemen's object being still what I will leave to some one else to name,—and, by that organ of impeccability, to which as far as appears they trust, their minds being, to their own satisfaction, sufficiently secured against all seduction from sinister interest,—their anxiety has, for an ulterior object, the keeping all such troublesome intrusion as effectually excluded as possible.

3. In further pursuit of that same end,—to secure aptitude to the work,—in so far as depends upon the above and the two other branches of appropriate aptitude on the part of the workman or workmen, namely, intellectual aptitude and active talent,—another object of mine, is—so to order matters, that no distinguishable arrangement shall be proposed, that has not for its support a distinguishable and openly expressed *reason* or set of *reasons:* and this security, the hand I offer is accordingly prepared to afford.

Gentlemen's object being still what I must leave to themselves or some one else to name,—their anxiety is—so to order matters, that no arrangement which in your nation is to have the force of law, shall have any one assigned reason for its support: in such sort, that whether there be any reason or reasons for it at all, and if yes what, shall remain for everlasting, a subject of unsatisfiable doubt and boundless conjecture.

4. In further pursuit of that same end,—regarding consistency of design, as highly conducive, not to say necessary, to the attainment of it,—lest, while in one part, the end, whatever it be, is pursued by one course, in another part it be pursued by an indetermi-

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nately different course,—my anxiety is—that, throughout the whole field, the groundwork thus laid shall, if possible, be the work of one and the same hand.

Gentlemen's object being still what I must leave to some one else to say in a positive manner,—but, as far as appears to me, from their own declarations, coupled with the nature of their situation, what may be called *mutual accommodation*—division of the whole stock of power and glory, upon the principle of a partition treaty,—their anxiety has been—to secure, and they have secured accordingly, to themselves and one another, this same means of mutual accommodation. And, of the result, and of the influence, which, if this work of theirs should become law, may be expected to be exercised by it on the greatest happiness of the greatest number, samples have already been brought to view, and in greater number than can naturally be welcome.

5. Still, in pursuit of that same end,—taking into consideration, with reference to works of the description in question, the immensity of the demand for appropriate intellectual aptitude and appropriate active talent on the part of the workman, and at the same time the deplorable scantiness of the supply everywhere in conjunction with appropriate moral aptitude in the same breast—yes—everywhere, Spain itself (forgive me, Sir, for saying so) not excepted,—my strongly manifested anxiety has from the first been, and continues to be, to secure to your country, as well as to every other, now and at all times, the greatest obtainable number of works of the above-mentioned description, by hands of the above description, for those to whom it belongs to choose out of: and, towards the fulfilment of this wish, I have laboured with as much energy as ever monopolist employed in his endeavours to secure his monopoly. Witness the second of my letters to Emperor Alexander as published in my "*Papers on Codification*."

Gentlemen, in their anxiety to keep out of the way the competitor from whose intrusion most trouble seems to have been apprehended,—took the measures, explained in the second of these my letters to yourself, Sir,—being such measures, as promised at least equal success against all similar intruders.

Under these circumstances, despatch would naturally be, in their eyes, no inconsiderable object: and by the principle of the *division of labour*, applied as it appears to have been applied, not only was harmony promoted, but despatch likewise.

But enough now, Sir, of anxieties: prepare yourself, for gladness. Whether, in the honourable breasts in question any such sensation is likely to be produced by the sight of any Code of my drawing, you are in a condition to imagine. In mine, the sight of theirs has been and is a source of real satisfaction.

The case is—in my way of viewing the matter, the tendency of this production of theirs, with reference to me, is—to promote in a variety of ways that intrusive design which is giving you, Sir, so much trouble.

1. It will, to an extent more or less considerable, lay open to my view those local circumstances, in the exclusive knowledge of which, gentlemen's modesty has found a support to their claim of exclusive privilege.

2. It thereby lays before me, as well as before the nation which it is my ambition to serve, a complete map of those parts of the field of law, to which, if to any, the objection derived from foreignership can have any application. Spreading out the map before me, it enables me, on each occasion, to make those references—those clear and exact references—of which you may have been seeing, Sir, so many more examples than it can have been agreeable to any eye in the situation of yours to see.

3. In a word, it lays before me—it lays before the members of the existing Cortes—it lays before their constituents,—it lays before the succeeding Cortes—it lays before the so deeply interested and observant nation, the only existing production, with which any one of those that I have in preparation has as yet to contend. It is not necessary for me, to attempt to affix any precise value to the use which this circumstance may be found to give to it with reference to my intrusive purpose. Suffice it to observe, that the less the value of the production in the eyes of the nation to which it looks for support, the greater will be its value with reference to the purpose of every intrusive rival.

Actual satisfaction at seeing the Code in its *candidate* state is one thing: eventual satisfaction at seeing it in an *elected* state is another. By the title of this Letter, as announced in my first, you may have been prepared, Sir, for a certain eventual satisfaction on my part, even in the event of my seeing the sanction of law given to the proposed Code in the exact state, in which it has been the subject of all the freedom you have seen taken with it. Of this same satisfaction you may at the same time have observed, that it is not altogether absolute and unconditional, but limited by conditions more than one. At that time, conditions more than one I had accordingly in view. But, on a nearer inspection, that my chance for satisfaction may be as favourable as possible, I have settled with myself to put aside these same conditions, all but one. Sanction then I say this proposed Code—Yes, and as soon as may be: if, within the time, the imperfections, which you yourself, Sir, have had the frankness to lay your finger upon, can, any or all of them, be removed, so much the better; not to speak of any of those supposed ones, which my own presumption represents itself as having given indication of. But, if nothing of this can be done, sanction it even as it stands at present.

Now then for the condition: it is neither more nor less than this—instead of the more

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nonly looked for everlasting duration, it but a temporary, and that a short one. n experience,—and a long one need not isisted upon,—has demonstrated its use-ss, then will be the time for giving to it eternity, which will be so much more to taste of its honourable authors.

onsidering the terms, in which your letter ks of this proposed Code,—were I even to lge a serious expectation of seeing this lition annexed to the passing of it, I hope, you would not find it altogether an immo-ate one. Such is the presumptiveness of hope, it extends even to this—namely, that, he endeavour to cause this condition to be nexed, your influence, which fame represents me as so powerful, will not be withholden. That, on the part of the gentlemen in ques-n, any willing consent to this effect will be en, is, I must confess, rather too much for hope. Feeling, each of them, on his own rehead, seeing in virtue of the partition eaty, each of them on that of every other, ose two most instructive organs, which there s been such frequent occasion to touch upon -the organs of impeccability and infallibility, -they will feel themselves under an incapa-ty of conceiving, how, in any such trouble-ome limitation, there can be any use. Alas! he closer I look into this matter, the less anguine is my hope. Turning to their "most ccredited Codes," whose wisdom they have nade theirs, I have found no precedent on which my hope can anchor itself. To the best f my recollection, on the foreheads of all per-ons concerned in the manufacturing of all hese several Codes, servants as well as mas-ers, the two organs have been alike promi-nent.

Whither then shall this same hope of mine betake itself? The answer is not difficult: to United Anglo-America, resting-place as well as cradle of all honest political hope. An example then I have already, in that rashly begotten, and happily expired, act of Congress, to which I have already had occasion, Sir, to solicit your attention, and to which, without fear of contradiction from *that* Ultramaria, I gave, or might have given, the denomination of the *liberticide law*. Here sits my hope quietly for the first moment. Oh but, (cries a voice,) that state is a democracy: ours is a monarchy: it is only in a monarchy that any such organs are seen. The illustrious *Gall*, by whom the organs of this class were first discovered,—did not the empire of Austria give him birth? Under the notion of promoting the greatest happiness of the greatest number, do not the rulers in that American seat of anarchy, make the condition of that same greatest number, depend upon the will of that greatest number? Can anything be more absurd? As for us, we make the condition of the greatest number—Oh, yes—and of all the rest—depend upon the will of one individual—one single individual, *without* whom nothing can be done, and *by* whom everything can be done: everything, so it be with that proper and necessary assistance, for the purchase of which it is that we have placed at his disposal the good things of this wicked world in all requisite abundance. In some countries there might be danger in such an arrangement: but in ours there is none. In some countries, all men's first care is for themselves, and their own particular connexions. But, in our country, when a man gets into an office,—if it be of a certain height, he forgets he has a self belonging to him: King and country are the sole objects of his care.

Well, Sir, be this as it may, I will not deliver myself up absolutely to despair. One other precedent I have in store. I should have said a mine of precedents: for such it is and a most abundant one. It is the practice of the government under which I write. Rotten as it is,—and hastening as it appears to me to be, to a change which cannot be for the worse,—sacrificing as it does on all points of contrariety the greatest happiness of the greatest number to the supposed happiness of the ruling few and the supremely ruling one, —still, on points on which no such contrariety has place, examples of prudence, the fruit of long experience, are here and there to be found: and this is not the least conspicuous nor the least incontestable. *Codes*, it is true, we have none: the very word is horrible to us. *Statutes*, however, we have every year, and every year in a heap such as would outweigh a hundred of your Codes. No, Sir: not a year passes, but amongst these statutes there are—I fear to say how many—for I have neither time nor eyes to count them—but I can venture to say multitudes, of each of which the duration is limited to a time certain, and that a short one. Witness even the *Six Acts*, which, for your information, I must call by the aggregate name of the *liberticide* acts, but which among us, are sufficiently known by the more concise and merely numerical name: Acts, which had the same object as that American Act, which by its death has been rendered the pride of that happy people, of which, during its life, it was the shame.

Even the statute, on which the standing army depends for its continuance—that standing army, by the dissolution of which the government would, if its own fears are just, be dissolved—even this statute (it is called *the Mutiny Act*,) lives but from one year to another. Trust not to me, Sir, for this: ask anybody—ask our Minister at your Court, whoever he may happen to be. Not that, in the possession of any such expatriated court favourite, you will be likely to find any such dry and bulky matter as the matter of our Statutes at large. But, that which everybody knows, you will find *him* knowing: and for this purpose it will suffice.

Here, then, Sir,—under a government, of the determination of which, on every point of con-

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flict, to sacrifice the greatest happiness of the greatest number to that of the ruling few, you cannot entertain a doubt—under this government, the life of which is in its own persuasion, no less inseparably attached to that of a particular law, than that of Meleager was to the log which somebody threw into the fire—under this government you see no such fear has place, as that of mischief to itself, from thus rendering the law capable of going out at the end of a twelvemonth. What say they then? Were it only for appearance sake, cannot gentlemen be prevailed upon to assign to this Code some experimental duration? If yes, say then one year, say two years: and, in either case, from thence, as is the custom with us, to the end of the then next Cortes.

You see, Sir, how mistaken the notion would be—that, between this exertion of self-diffidence and prudence, and the practice of depredation, to an amount so far above anything that in your country men can have any conception of, there could be anything of practical inconsistency. Those who require such comfort, let this comfort them.

But, (methinks, Sir, I hear you saying to me,) this contentment on your part, is it in any degree consistent, with the opinion, of which such copious intimation is given in your preceding Letters?

Sir, I will tell you simply how that matter stands. Good and evil may be considered in an absolute point of view, or in a comparative: compared with a greater, a lesser evil is good. No mass of law so bad, that I would not vote for it, on condition of its taking the place of a worse.

Of the state, in which the penal branch of law exists at present in your country, gentlemen have, in their preface,—though but in the way of allusion, as to a state of things out of dispute,—given that account, to which, in the second of these Letters, I had occasion to allude. All circumstances considered, I can scarcely entertain a doubt, but that, in comparison with such a Code, even that, which I have been so tediously commenting upon, would be a blessing.

From yourself, moreover, I learn, Sir, that —to an extent, the precise limits of which are not known to me, but which appears not to be a narrow one—the existing atrocities alluded to fail of receiving execution and effect. Here then is my hope and my consolation. Of the *existing* Code, the articles which in their view are unfit to receive execution, have, to a considerable degree, actually failed of receiving it. An inference I indulge in is this: of the *projected* Code, the articles which, in my view, are unfit to receive execution, would, to an amount more or less considerable, in the event of its becoming law, be in that same case.

In a certain state of the law, the existence of the human species depends upon the degree of execution given to the law: or, at any rate, the more exact the execution, the greater is the happiness of the greatest number in the community in question. In this state is the law, for example, in the Anglo-American United States: notwithstanding the remnant of that poisonous matter, which was originally imported from the Augean stable on the other side of the water; and which the lawyers, who fatten upon it, still keep, on the penal and civil part of the field, unexpelled.

In another state of the law, the existence of the species depends upon the non-execution of the law, and the consequent impotence of the ruling tribe: of the ruling few, under the supremely ruling one. In this state, for example, is the law, in a country which it would be superfluous to name. Carried into full execution and effect, libel law would of itself suffice for the extirpation of the inhabitants: for the conversion of all dwellings into jails, of all the inhabitants into jailors or prisoners; and, —by giving this destination, to all those on whose productive labour, themselves and their fellow-countrymen depend for subsistence,—substituting starvation to existence.

In your country, though utterers and readers of libels, all newspapers without exception included, are not so numerous as in the one just alluded to, laws, I cannot doubt, might be found, by the aggregate virtue of which, if fully executed, an equally complete clearance would be effected.

Wherever Roman law has reigned,—in addition to a functionary, by whom, under his own name, power of pardoning, applicable to offences in general, has been avowedly possessed and exercised,—other functionaries there are, by whom, without the name, that same power has been possessed and exercised. Where the judicatories have not possessed the power of giving execution to penal laws of their own motion,—nor without being called upon by a servant of the Monarch in the situation of prosecutor-general,—the whole of this covertly pardoning power has had *his* single breast for the seat of it. In so far as this has been exercisable by them at their own motion, this mode of proceeding has been styled the *inquisitorial*: and, within their several ranges, the power of the prosecutor-general has had the judges of the several judicatories for sharers in it. According to *Bannisa*, thus, for example, if my recollection does not deceive me, stood the matter in the Austrian dominions; according to *Boehmer*, in the Prussian. I should expect to find the case standing on much the same footing among you: not to speak of the rest of Europe.

With us, the matter stands as yet upon not quite so bad a footing: the power of giving effect to the laws on which personal security depends is not made an object of monopoly: our Monarch being God upon earth, as we are all of us taught from Blackstone, our lawyers, as far as depends upon them, have, it is true, given to him the power of putting to death every man it would be agreeable to him to put

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to death, on condition of finding one hand to do the job, and another, by the counter-signature of a pardon, to concur in giving impunity to it. But, commodious as upon this statement it may seem, this mode of proceeding,—signatures and counter-signatures being visible things,—has not yet become a customary one: modes not less effective but less conspicuous have hitherto obtained the preference: discriminating slaughter has not yet been visibly added to indiscriminate. Matters, however, are in preparation for it. Recent progress has been made. The last session but one or two produced a statute, by which the right of certain relatives to prosecute for the murder of the correlative without permission from the Monarch,—in which case, on conviction, a pardon from him was without effect,—was abrogated. Since then, the life of every man in the kingdom hangs by a thread, which a word from the king may cut at any time. Mine, Sir, remaining as you see still uncut, what gratitude do I not owe!

I beg your pardon, Sir—I have been digressing. What belongs to your case is this. Under a government, which has for its real object the supposed happiness of the ruling few through the sacrifice of the real happiness of the subject many,—the system of law being to such a degree bad, that the execution of it if complete would suffice for the extirpation of the species,—in such a state of things, if the species remains in part unextirpated, it must be indebted for its existence to some arbitrary power, by which the purposes proposed by the makers of the law are prevented from being carried into effect. While your judicial establishment, and your system of judicial procedure, remain upon their present footing, or upon any footing standing on a ground of Rome-bred law,—the otherwise natural effects, of codes drawn from that source—of codes such as the one I have before me—will, in arbitrary powers such as those I have been speaking of, find a palliative. And on this palliative rests the confidence I entertain, of seeing your country still inhabited, even supposing the code in question to pass in its own words unchanged.

You are now, Sir, in a condition to judge, whether, on the satisfaction above declared, in what degree soever well or ill grounded, inconsistency can be charged.

Though, beyond the above-mentioned temporariness, lest you should be asking too much, I should be sorry to see you asking for anything in the character of a *condition*,—a few other things there are, which I will venture to mention in the character of simple propositions.

1. One is—that of an Article, declaring, that for giving increase to the quantity of punishment appointed in any case by the new Code, no recourse shall be had to any at present existing portion of statute law: any more than for applying punishment, in any shape or degree, to any act to which this same new Code has not applied punishment. Something in this view I should expect to find actually done, but time and eyes forbid the search.

In Title I. chapter xiii. as above-mentioned, I see a chapter, entitled "On delinquencies (*delitos*) and delinquents not comprehended in this Code:" and therein, besides laws relative to matters ecclesiastical and ordinances relative to matters military, I find—namely in Article 185, over and above *delitos*, mention made of *culpas* as being commissible against the regulations or ordinances which govern (*rijan en*) any matters or branches of the public administration. But, of these non-comprehended portions of law, I see no more particular designation given.

For the purpose here in question, the more obvious, as well as the shorter and at the same time the more complete course would be—a general clause, killing at one stroke, with the exception of such as were kept alive by a list made out for that purpose, the whole body of the penal laws found in existence. This would be the only endurable course, supposing the survey, taken on this occasion of the field of penal law, an all-comprehensive one. But, to the gentlemen in question,—if the truth may be confessed, this same idea of all-comprehensiveness, considering how natural it is for a man to measure all other men's faculties by his own, scarcely should I expect to find it an endurable one: and, at the hands of him by whom accomplishment is regarded as impossible, accomplishment cannot reasonably be looked for.

Even among us, among whom, how ill soever applied, experience in the field of legislation is so much more abundant than with you,—men, in other respects not destitute of intelligence, are not wanting, to whom the idea of setting, in any such way, any precise bounds to the demand for punishment and coercion, is an intolerable one.

"Not being myself (without more trouble than I choose to bestow) able to descry any such limits, the thought that, by any labour he can bestow, it should be in the power of any other man to trace them out, is intolerable to me." Such is the confession, involved in every declaration, of the impossibility of substituting on the field in question light to everlasting darkness. What is above said with relation to your *Statute Law*, or, as it is called, *Written*,—may, with little or no difference, be found applicable to your *Common Law*, or, as lawyers love to call it, (because there is so much writing in it,) *Unwritten Law*. I mean the *Rome-bred*, commonly called the *Roman Law*. In it I behold a still more vivacious, as well as venomous hydra, than in your statute law. A hydra, yes:—but, unfortunately, not in your Legislation Committee—no, not even in its President, whatever he may behold in a looking-glass, can I behold a Hercules.

What if, by their Code,—after the storm of horror and contempt poured forth upon the system of penal law which they found in exis-

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tance,—Gentlemen should be found to have left it in a state of undisturbed existence; adding thus, instead of substituting, the new load of their own framing, to a burthen declared by themselves to be an intolerable one! Should such an omission be found actually to have place, your exertions, Sir, will, I hope, not be wanting for the repair of it.

Do what you can, Sir, I cannot very well see how, in the situation of Advocates, a set of men, nurtured in Rome-bred law, can effectually be prevented, from pointing, if not in a direct, in a little less effectual though indirect way, to the old hag for an interpretation of it: nor,—without which the call would be hopeless,—men, in the situation of Judges, impregnated with the same poisonous milk, be prevented from giving ear to it. Thence it is, that, for substituting certainty to uncertainty, cognoscibility to uncognoscibility, there exists not any possible instrument, other than a complete mass of expository matter, subjoined all along to the main text, and intervening between the main text and the Rationale, interwoven, as in my above-mentioned French works, stands not only proposed, but, if I do not misrecollect, exemplified.

Yes, Sir, when completed, the collection of Codes should, either in the way of insertion or in the way of reference, contain everything, to which the force of law is given by government: and, while it embraces everything in existence by its power, it should embrace the whole contingent future by its providence.

One little proposed arrangement I would not venture, Sir, to trouble you with, were it not for the facility with which—and, I hope, without any very sensible wound to national honour and glory, or soreness in the organ of infallibility—effect might be given to it. In this Code, the numbering of the Articles goes on, I observe, in one and the same series, from first to last: number of the last Article, 829. In this arrangement no method has place but that of the numeration table, nothing of what is meant by *classification*. But, along with this arrangement, comes a system of classification in the customary form; or, at any rate, a form resembling what is customary. First comes a Part styled *The Preliminary Part;* then come Part the first and Part the second. Under Part the first, I find eight Titles; under Part the second, three: under every Title, except Title eighth and Title ninth, I find Chapters more than one: and, under every Chapter I suppose there may be, under little less than every chapter I am sure there are, Articles more than one.

This being the case, the little arrangement I would venture to propose is—that, to the number of the Article, reckoning from the first in the whole work,—be added, or substituted, the number of the Article, reckoning from the first in the Chapter of which it forms a part.

Suppose this not done, note, Sir, the inconvenience. In process of time, comes an Article to be inserted, or an Article to be repealed. Take in the first place the case of insertion. Suppose the insertion made at the end of the series, the system of designation receives no disturbance. But, suppose it made at the commencement of the series, the consequence is—that, if the numerical order is still preserved throughout the whole of the series thus constructed, the numerical names by which the Articles were originally designated are now all erroneous: and, to the number of each, the number of that which was next in the series must be substituted, or confusion will be the result: and, in whatever part of the series the new Article is inserted, the numerical names of all above it remain indeed unaffected, but those of all below it require to be subjected to the change: so, in case of a repeal, the consequence is—a state of things which is the *converse* of the above. In practice what will be the result? That no such insertion or expunction will have place. Whatever is therefore done, must be done by an independent law, leaving the numerical arrangement undisturbed. But, in this way, the logical arrangement, which has been given to the existing series of Articles, cannot be extended to any supplemental ones. Now,—instead of the arithmetical arrangement throughout, with the logical arrangement here and there jostling it,—suppose the usual logical arrangement had been employed, with the arithmetical, as usual, in subordination to it. In any Title, and in any Chapter of that Title, suppose a new Article added: at the end of the series of Articles contained in that Chapter let the addition be made,—the classification will be still preserved, and everything left unchanged and undisturbed.—Conversely, suppose repeal made of an Article in that same Chapter,—at the end of the series of Articles belonging to that Chapter insert an Article, giving notice that the Article in question is repealed. In case of substitution, the notification will be—"to such an Article (designating it by its number) substitute the following."

With that same method of theirs, it being theirs, the Honourable authors of the logical method in question were, it must be presumed, not ill satisfied. The little alteration here submitted has no other object than the giving to that same method of theirs a degree of undisturbed continuance such as it could not possess otherwise. If not *adoption*, this little intrusion may at any rate, I hope, obtain *forgiveness*.

As to the origin of this change-excluding method,—in the *organ of infallibility* I cannot but suspect it might be to be found.—*Question* to the *Genius of the organ:* To a work thus perfect, the Demon of presumption himself, could he ever have the effrontery to propose, in any part, a change!—*Answer:* Impossible.

Under the inspiration of this same Genius it was, that the authors of the Constitutional Code ordained in positive terms that no change should have place for eight years: tacking, at

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the same time, by a stroke of refined policy, to the end of that period, an indefinite one. And, with the inspirations of this same Genius, the honourable authors of this same projected Penal Code appear to be no less sufficiently impregnated.

Quitting the *allegro*, I must return to the *penseroso*.

Proportioned to the severity, if there be any, in the above remarks,—especially if in any degree it should be felt to be warranted by justice,—will naturally be—the sensation of chagrin, produced in the breasts, of whatever persons are, in virtue of the parts respectively taken by them in the work, the subjects of them. Believe me, Sir, or believe me not, it is not without a correspondent chagrin on my part, that any such unpleasant sensation can ever present itself to my mind. Imagination finds no difficulty in placing me in their situation. Triumph, were I assured of it,—triumph on any occasion, and in any shape, if the persons triumphed over were present, would to me have more of concern than joy in it.

In no sensitive being could I ever yet witness pain,—whether body and mind, or mind alone, were the seat of it,—without catching, as if by contagion, a portion more or less considerable of it. It is thus that I am constituted: that I am so, is it not known to all that have ever lived with me?

The consequence is,—that in the present instance, lest I should fail in the fulfilment of what appears to me my duty towards your nation and mankind at large, it is all along necessary for me, to keep my mind abstracted from any effect it may have upon them in any such unpleasant way, as completely as possible. All this while, in supposing the production of chagrin by such a cause, I look—not to the honourable gentlemen in question, of none of whom have I the honour to know anything but what I see in public documents,—but to the universal and unchangeable nature of man, in the situation in which I see them placed. It is to this cause, as much perhaps as to any other, that we are indebted for libel law: it is for this cause, that men in such abundance—(and the gentlemen in question could direct your regard to some examples)—are so eager in their endeavours, to consign to ignominious death, those whose misfortune it is to differ from them. In speaking of chagrin from such a cause, I speak of that which, it seems to me, can scarcely fail to exist: not of anything which I should expect to see declared. How it is with man in such a situation, often have I had occasion to observe. Ask him, while the animadversion is applying itself—speak of the effect naturally produced by it, and express your own regret at the thoughts of it—you will be taken up short, your sympathy will be taken for insult: and the more acute the feeling is, the more decided will be the protestations of indifference.

Among the effects of these operations of mine, if any effects they have, I cannot therefore but number these unpleasant ones. As to their original cause, operations and effects together, it is no other than that which, on every occasion, has place in the case of the medical operator. Exactly as much unkind feeling, and no more, have I towards the gentlemen in question, collectively and individually, as the surgeon has towards his patient. When the surgeon operates, it is for the good of the individual operated upon, and, with the exception of his particular connexions, no others. In my case, it has been for the good of all Spaniards of both hemispheres, that, in wish and endeavour at least, I have been operating, and through Spain, sooner or later, for the good of the whole human race. Considering that, in all this, I make no personal sacrifice in any shape worth mentioning, judge, Sir, whether, without much danger from the imputation of credulity, you may not venture to believe me.

Be that as it may, judge then, Sir, whether, by the contemplation of any such universally encountered uneasiness, as above, I should have been justified in turning my back upon the unmeasureable mass of misery, which these remarks of mine, such as they are, have been labouring to alleviate, and in the production of which I should have been a participator, if, by any such narrow sympathy, my pen, such as it is, had been stopped. Think, Sir, whether, by a single instance of execution given to a single one of the one-and-twenty homicidal articles above spoken of,—every one of them, in the view of so many other attentive observers of human nature as well as myself, so much worse than useless,—suffering could fail of being produced, to a greater amount, than in all five of these same illustrious breasts put together, could be produced, by anything that has been said, or ever could be said, by the unknown stranger,—placed as he is forever out of their sight as effectually as if by the hand of death.

Ere this, your inward sanction cannot, I think, Sir, but, to an extent more or less considerable, have been given, to the persuasion, in which, on my part, this correspondence commenced: I mean, the persuasion of the inevitable disadvantage, with which, with reference to the greatest happiness of the greatest number, it could not but have been carried on, had my part in it been to be strained through a censor's sieve, though a *Conde de Toreno's* had been the hand that held it. Thus much I can venture to affirm, and without fear of contradiction,—that, in the multitude of remarks, the freedom of which, be the justice of them what it may, has been so undeniable,—there exist, in no small proportion, such as, even in the persuasion of their justice, a prudent man, in your situation, could not have brought himself to give utterance to. Whatever were the demand for animadversion, could any such man have poured forth any such body of ani-

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madversion, on this same work of your selected colleagues, either in their presence or out of it? In your situation, could a man have spoken in any such strain, of the object of such extensive idolatry—(oh, that there were none worse grounded!) your Constitutional Code? In your situation could a man have spoken in any such strain of aristocracy at large? In your situation, could a man have spoken of the order of lawyers in particular, as I have found it so continually and indispensably necessary to speak of them? In your situation, could a man have spoken of the order of churchmen, as I have already begun to speak, and shall have to speak again, in my next and as it were postscript letter? In your situation, could a man have spoken of the situation in which your Cortes is doomed to sit, breathing an atmosphere, loaded, as I have shown it to be, with the fumes of sinister and corruptive interest? exposed to a *miasma*, against which scarce could a *Fontana d' oro*, in the metropolis of every province, afford a sufficiently powerful antidote? In your situation, could a man have anything near so strongly invited attention, as at every turn I have seen reason to do, to the union of the most perfectly unrestrained discussion, with the perfection of security, harmony, public economy and good government in every imaginable shape, in the instance of the Anglo-American United States? In a word, in your situation, could a man have spoken, as I have found but too much occasion to speak, of monarchy?—of monarchy, in any the least absurd and mischievous form in which that disastrous result, of primæval necessity in the infancy of society, can possibly present itself?

[In* your situation, could a man, Sir, have spoken, as I have found but too much occasion to speak, of monarchy? Fancy not, however, from anything I have said—fancy not, Sir, that you have been hearing me say—*Rid yourselves of your monarchy*. True it is, that no government, to which the name of monarch ever has been or ever can be applicable, ever has been or ever can be anything better than a system of established plunderage: plunderage—regulated indeed, but only because,—unless it be in this as in every case regulated,—the matter of plunderage, and with it the profit, must soon cease. In Spain, monarch's established share,—according to official accounts, taken and made public here about the year 1787,—one-fourth of the whole expenditure of the government: besides ulterior expenditure, to an amount unascertainable and unlimited.

True it is, that by no man has any attempt been ever made—by no man will any attempt be ever made—to show in what way it is that, from the subjecting all to the will of one or of a few, the happiness of the greatest number can receive increase.

True it is, that by no man has any attempt been ever made—by no man will any attempt be ever made—to show how, by giving everything to one or to a few, or by placing everything within the grasp of one or of a few,—subsistence, abundance, or security in any shape, can, any more than equality, be afforded to all, or to so much as the greatest number.

True it is, that by no man has any attempt been ever made to show—by no man will any attempt be ever made to show—that, in any instance, in which the ruling few were not dependent on the will of the subject many for their continuance in rule, they ever failed to give to their own interest the preference over that of the subject many; or how,—in case of every such constant preference of every one else to self as they pretend to give,—the human species could so much as continue in existence.

Is it in human nature,—that a monarch, full of resentment for restraint endured—restraint, which in every shape is in his eyes an injury—is it in human nature,—that a man so situated should, by anything but terror or impotence, be induced to part with any the least particle of power, which he has been in use to exercise, or so much as to wish for?

Is it in human nature,—that, in a state of indigence, (and so long as he has anything that is not his own, every monarch is in a state of indigence,) any such man, in any such indigence, should ever, with patience, behold himself reduced to a state of still more pinching indigence?

All this, Sir, without much strain upon the fancy, you may actually hear me saying: but still what you do not hear me saying is—*Rid yourselves of your Monarchy*.

Regulated plunderage, to whatever extent carried on, is still a less evil than unregulated plunderage to the same extent is.

Conducive to the greatest happiness of the greatest number no government can be—if, and so long as, the greatest number think the contrary: for, can any man be happy, any farther than in his own opinion he is so? And, on this subject, or any other subject, sitting where I do, how can I tell what they think? Whatsoever care has even as yet been employed upon their minds, has it not been employed to make them think wrong, or, rather than that they should not think wrong, to prevent them from thinking at all?—No, Sir,—in a few years, in no eyes in which the greatest happiness of the greatest number is the only legitimate end of government,—will any government, other than that of a representative democracy as in the Anglo-American United States, be *legitimate*. But, either in one body, or in a cluster of confederated bodies, have you,—in any such proportion as *they* had it, or in any other sufficient proportion,—the stuff of which representative demo-

* Though written at the time, the paragraphs between this and the bracket in p. 543 were not inserted in the Letters as sent to the Conde de Toreno.

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cracies are made? A representative democracy, not less necessarily perhaps than a monarchy, must have a chief. The Americans had their Washington: and, in default of him, with the exception of his next successor, every President they have ever had, would have made a Washington. But, among you? is there anything out of which a Washington could be made?—There may be, for aught I know: but how can I know?

Desirable or undesirable, in a constitution—made, of materials such as yours is made of—materials so irreconcileably discordant,—change, in one direction or in the other, is in my eyes altogether unavoidable. Saying this, what I do not say, is—*Rid yourselves of Monarchy.* But what I do say, is—Whatever change you make, be it in favour of the greatest happiness of the greatest number,—not of the ruling few, or of the supremely ruling one: be it, towards a form by which all causes of insecurity and discontent are excluded, rather than towards that form, under which among you, they were so recently operating; operating, all together, and with a so disastrously effective force.]

Now, Sir, permit me for a moment to indulge in a supposition, which, in its matter, whatever in your eyes may be the probability of it, will, I am confident, not be, in every part, displeasing to you: it is this. After sight of the objections brought to view,—Gentlemen, being in their own minds satisfied of the reasonableness of them to an extent more or less considerable, come forward,—and, on such considerations as, in their judgment, shall be best suited to the occasion, declare themselves content, or desirous, as they think best, that this work of theirs shall sleep a while on the shelf: or, (to take another supposition, and which, for the reason above given, may be perhaps a preferable one,) to an extent more or less considerable,—amendments, of the nature of those which I have ventured to submit, together with others that may perhaps be suggested, having been made,—the proposed Code, at their presentation, passes: but with a clause confining the duration of it to a certain limited time, and that, as above, not a long one. To these two suppositions, have patience with me, Sir, while I add one more. At the suggestion of these same most competent hands, not only is the door thrown open, but invitation given—given to every man whom it shall find disposed to accept it—to deliver in, with or without further remarks on the only as yet proposed Code, a Code of his own penning, with or without an interwoven *rationale*, as he shall be advised.

Whatever may have been the sins found to have been hitherto manifested, (always supposing that into a political situation so elevated it is possible for political sin to have found entrance,) whatever may have been the sins manifested,—a confession, such as the above, would it not be an ample—would it not, Sir, be a glorious atonement? By such sin, followed by such atonement, would not more merit be made manifest, more magnanimity displayed, more admiration deserved and called forth, than if in no shape sin had manifested itself?

Condemned, on the occasion of I forget what controversy,* with *Bossuet*—condemned by the constituted authorities of the country and the time,—Fenelon, Archbishop as he was, of his own motion, ascended his own pulpit, and, in the face of the assembled multitude, read his own condemnation, together with the retractation he disdained not to make in consequence. It is for the multitude at large I bring this anecdote to mind: for to yourself, Sir, it can scarcely, I think, be new. On a field of controversy such as that was—on the part of a mind such as that of the author of Telemachus was—sincerity may, to some eyes, appear not altogether exempt from dispute. Not so either self-command or enlightened policy. Matchless is as yet the splendour, with which the heroism of the man, displayed in a shape so unexampled, stands illuminated. Of victory over others, you may see almost as many examples as you see contests. Examples of victory over self, you may look for till you are tired. The retractation made by Fenelon, was made under the eye, and in conformity to the known pleasure of a man, from whom, on his part as on the part of everybody he ever saw, everything imaginable was to be hoped and feared. If, in consequence of any of the arguments submitted to yourself, Sir, in the first place, to the gentlemen themselves in the next place, any such self-sacrifice as above suggested should come to be made,—it will, by an admiring public, be seen to have had anything rather than hope or fear, looking to the individual, at whose suggestion it will have been made.

Well, Sir, if, in the honourable eyes in question, all this inducement is not yet enough, here is something more. Over the world of ideas, with this their instrument of conquest in hand, their aim has been (in their preface does it not stand sufficiently avowed?) universal empire. If, without any to share in it, it be in their eyes sufficiently within their reach, they will continue still to strive for it. In the other case, putting off Don Quixote, and putting on Sancho Pança, permit me to say, Half a loaf is better than no bread. So says our English proverb, for which there can, I think, scarce fail to be a Spanish one. If, leaving to some other, as it may happen, that lower part of the honour which belongs to the *fundator incipiens*, gentlemen's magnanimity can content itself with that upper part which belongs to the *fundator perficiens*,—that highest part may be still their own. Let experience, Sir, declare whether this sort of peaceful conquest be quite so remote from the re-

* The celebrated dispute as to Quietism.—*Ed.*

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gion of probabilities as some would be glad to see it. By a rare union of merit with fortune, circumstances favouring, the Spanish Constitutional Code—has it not already found numerous adopters? adopters in all nations by whom the attempt has been made to render Monarchy (Oh, Herculean, or rather Sisyphian labour!) consistent with the greatest happiness of the greatest number? Let them have received a plan, in which the dictates of that principle are pursued with undeviating consistency—pursued over the two remaining parts of the field of law—the *Penal* and the *Civil*,—think, Sir, to what extent, sooner or later, Spain may not, by their hands, have spread over the willing nations, the blessing of her laws!

Whatever may be their determination on that question, in mine their can be no difficulty. If life and faculties continue, my Codes will successively be drawn up. The encouragement, which, from so many quarters, I have received, would, of itself, have been a sufficient *stimulus*. The discouragement, received at the hands of the Legislative Committee of the existing Cortes,—not to speak of the Cortes itself, which on this ground knows nothing of what it has seen, heard, or received, —has been an additional stimulus. As the work proceeds, it will find its way into various languages: the Spanish will not be the last.

Into your *Ultramaria*—including all that *was* your Ultramaria—it will, in that as well as other dresses, find its way without difficulty.

Thus far my determination reaches. But now commence my uncertainty, and my desire of information, in so far as, in a case such as that in question, information is possible. Is it through the regular channels—or is it in the way of contraband, with other piece-goods, that the fruit of my endeavours to serve your constituents will have to make its way, to them, and to their paulo-post-future representatives? I am prepared for both sides of the alternative: but it would be a convenience to me to know, in which of the two the greatest probability is to be found.

Sir, when in dernier resort, for giving effect to whatever endeavours can be used to serve your country, I put on the garb of a malefactor and assume an attitude of defiance, it is not—indeed it is not—with a light heart. But, in the state in which your legislation still is: still is, and for I know not what further length of time seems doomed to be,—what else, by a man whose first regard is neither for laws nor makers of law, but for those for whom such laws, in as far as they are anything better than nuisances, must be made,—what else, what better, Sir, can be done? If you are fed, must it not be against law? if you are clothed, must it not be against law? as if in one word *prohibition* were contained the united powers of capital, skill, and access to market! If you are instructed, no wonder, then, if this too must be against law.

Believe me, Sir, neither is the uncertainty I speak of in any degree a feigned one. I see what the present is: but, until the millstone, which the Committee, with but too much countenance from their colleagues, have suspended over your press, has either been set aside, or been let down upon it and crushed it,—I am unable to see, in anything that is either past or present, any security for the future. Of the most comprehensive of those works of mine that are in French, the first volume, thanks to the zeal and talent of Dr Toribio Nunez, has been some time in Spanish: the others may, by this time, for aught I know have followed it. True is it, that, to the functionaries, whoever they may be, whom the Legislation Committee looks to for giving execution and effect to its Code, I should not expect to find, that in my Penal Code, even with the *rationale* standing part of it, there is anything that will give any heavier offence, than may have been given to them already by those works, or even than that which may come to be given to them by these present Letters. But, in this respect, the lot of this little work remains as yet in total darkness: and, supposing this darkness cleared away, and cleared away in my favour, still the like darkness would cover those so much more extensive and important future works. If I have not, in either instance, any assurance of proscription,—still, in that quarter, in neither instance, have I anything like an assurance of toleration.

How is it possible, Sir, that I should? If, with the functionaries in question, matters for that purpose, are already, or shall have come to have been, arranged,—what man, whose misfortune it is to give publicity to anything by which their displeasure shall have been called forth, can have any sufficiently grounded expectation of being suffered to live: not to speak of incarceration in its most hideous forms, and for never ending terms. *Subvertir, trastornar, alterar, embarazar, guardárse*—any one of these words, not to look for others, would it not be sufficient, Sir, for the fatal purpose?

True it is, that the *Gobierno* of the day, the septemvirate of Ministers,—if I may believe the official assurance of one of them, entertained, not many months ago a desire to see these projected works of mine: a desire which they were accordingly pleased to make communication of to the King. But, besides that the offence, which I cannot but be too well assured cannot fail to be given by these letters of mine, had not then any existence,—the gentlemen, of whom the government of that day was composed, have for some time been—what, in a few months, the Gentlemen of the Legislation Committee in question will be: and, under the proposed Articles in question, I see nothing that should prevent these my quondam honourable and official supporters, from being involved in that same fate, which, but for the circumstance of distance, might so naturally be mine.

True it is again, that for any such work there could not, I should suppose, be much to fear,

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upposing the circulation of these letters to emain unrepressed. But, unless it be from ourself, Sir,—for this, even in the present tate of things, I cannot see any tolerably vell-grounded assurance. How much less can , under the proposed Code in question, if, in nything like its present state, it shall have ecome law?

Now then, Sir, comes a fresh vexation, which know not how to avoid exposing you to: a equest for answers, to a few unavoidably roublesome, and therefore sincerely reluctant uestions. The uncertainty above spoken of, t being the cause and reason of them, will, I ope, be received as an excuse, or I have none.

Not to take, for the subject of the desired nformation, a work that as yet has no exis- ence, I will take for a representative of it those Letters which have already given you so much rouble: and hereupon it is that I take the iberty of submitting to you the questions that ere follow. To this work I might add those ther tracts of mine on Spanish and Portuguese affairs, which in the original English have for ometime been (as you inform me) in your hands,—were it not that, if this little work is tolerated, there can be no fear for either of those lesser ones.

1. Without special interference, on the part of yourself, Sir, or any other person in particular, is it your opinion that they will, or that they will not, be suffered to circulate unrestricted? to be bought and sold freely, and all over the country, as books in general are? and this without danger in any shape to any persons by whom, in any part of Spain, any part shall have been borne in the publication of them?

2. If there be any such impediment to their diffusion, may I be warranted in any such hope, as that the influence of your declared opinion and wishes will be employed in the endeavour to remove it?

One word more, Sir, and the experiment, so unexpectedly made upon your patience and power of forgiveness, is at an end.

Prepare yourself now, Sir, for what I am sure you cannot be accustomed to receive—and what I myself am as little accustomed to give as to receive—a menace. Menace as it is, it is however of that sort, a man's sensitiveness to which is—not in the inverse but in the direct *ratio*, of the elevation of the place he possesses in the scale of public estimation, and of the goodness of his title to possess it. It is of that sort, or you would not have it to encounter, I believe, from anybody, and I am sure not from me. Nor yet from me, but for the weakness of my position, would you be troubled with it.

That which, in my character of unretained but not the less zealous advocate of your nation, I have need of, so far as you are concerned, is—to see you at liberty: at real, and not merely apparent liberty. But, to a man in a situation such as yours, exposed to so much pressure in so many sinister directions, it is impossible to receive liberty but from some opposing pressure.

In the assembly of the deputies of the people you cannot take your seat, but encompassed by colleagues, from whom, in all varieties of form, you will hear this in substance—"Leave the intruding foreigner unnoticed. Let him write on at his peril. The constituted authorities will take charge of him: What is he to us? What need Spaniards care for foreigners? Let him remain unanswered. Least said is soonest mended. What a pity you thus noticed him! But this will be a lesson to you, and to all of us in future."

In the midst of all this (for how guarded soever the expression, you see the meaning that is at the bottom of it)—after such a warning from the highest but narrowest section of the tribunal of public opinion,—is it in the nature of the case, that a man in your situation should feel himself in possession of real and effective liberty?

Oh no! it is impossible. I see virtue struggling, but tottering. Now then for a support.

Where the desire exists to maintain a line of conduct, which, in the nature of the case, cannot but be in contrariety to the wills and opinions, to which a man is under the necessity of showing a certain deference,—a sense of superior duty presents not only a justifiable cause, but may frequently be found a convenient and allowed plea, for yielding to it; and thus, out of obligation, real or though but apparent, springs real liberty.

In the tribunal of public opinion—the only efficient guardian of political virtue—there are (I believe I have already made my bow to the superior of them) two grand sections. In your situation, on a thousand occasions, the suffrages of that *one* section are irresistibly forced from the line of rectitude by the pressure of a swarm of particular interests. In the inferior and more numerous section, is the only steady seat of that virtue, which has for its object the greatest happiness of the greatest number.

At Paris, sits one of the most respectable committees of this multitudinous body. Paris, Sir, is not unknown to you: in Paris you behold, Sir, or report has been misled, a not altogether unattractive residence..." If I decline doing what is thus asked of me, what will Paris say to me?" This, Sir, is a question you need not be ashamed to put to any of your colleagues. Now then, Sir, for my menace—Return to Paris when you will,—these letters, in a French dress, will meet you there.

Now then, Sir, you are free: free to prefer public good to private considerations. Now, Sir, you stand at your ease, and armed. Receive at length in form, the assurance of that respect, tokens of which, so much more demonstrative than any express declarations can be, have in no part of this long address (I stand persuaded) been found wanting, from

JEREMY BENTHAM.

To the Comte de Toreno, &c. &c. &c.

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LETTER VII.

On Religion, and the Plan pursued in the proposed Code, for the support of it by death and other punishments.

RELIGION—*Catholic Religion*—*Pena de muerte*—Death (so says Article 230) death, the portion of every one, who, directly and by deed shall conspire to *establish* (*establecer*) in any part of Spain (*en las Españas*) any religion other than the Catholic (Spanish Ultramaria included or not included:—I should expect to find it included.) *Establish?* What is *to establish?* A set of men who, in a house, appropriated or not appropriated to the purpose of religious worship, or let it be in open air, perform religious worship in a way of their own, —may not they, under this Article, by a willing Judge, without much difficulty, be killed for doing so?

On this subject, Sir, I should hardly have thought it worth while to trouble you with any observations on my part,—but for the words, by which, speaking of "*les Articles qui parlent sur la Religion,*" you encourage me with the assurance—"*cela ne passera pas.*" As to its being meant to apply to all these Articles without exception, this could scarcely, I think, have been your meaning: but, at any rate, I hope the prophecy will prove a true one, if applied, as I hope it was meant to be, to this same 230th Article. It being no more my intention to say anything, either in this letter, or in any code of my drawing, against the Catholic Religion, than to run my head against a wall,—I find no difficulty, Sir, in submitting to you, in relation to this subject, a few scattered observations.

To every sincere and at the same time firm believer in the Christian Religion in general, and in the Catholic edition of it in particular, —it cannot, I think, but be matter of sad concern, to see the testimony of so many illustrious names, attached,—as in the Articles 230, 231, 232, 233, 234, 235, 236, and I know not how many besides, in the Chapter declared to be appropriated to that subject,—to any such declaration, as that, in their opinion, without support from temporal punishment inflicted on gainsayers, the belief in it would not be able to stand its ground.—Not stand its ground? Not in Spain? What should hinder it? In Ireland, as so many Irishmen settled in Spain can testify to you, it not only stands its ground, but gains ground: and that not only without support from oppression, but in spite of it.

"What?" (says somebody) "and, among all the sorts of acts, to which the Chapter on Religion seeks to apply prevention, and for the purpose of prevention, punishment,—is there absolutely not any one to which, if it depended upon you, you would apply prevention, and even in some shape or other, punishment?" O yes, some there are unquestionably: namely, all those acts by which, to human beings to an indefinite or other adequately large extent, I see any real evil,—in a word, any sensation of an uneasy nature, to a certain degree of intensity,—produced. Here, then, is a line drawn, which, if drawn, on the proper plan, would be at any rate a tolerably plain and clear one. All exhibitions, which, being to the minds of individuals taken in any considerable number, productive of uneasiness on a religious account, are offered to their senses in such manner as that the unpleasant sensation produced by them, whatever it be, is unavoidable—all such acts are, in my view of the matter, objects calling for prevention by means of punishment; and, in this consideration, I cannot but approve of the principle acted on in Articles 237, 238, and 239 of the proposed Code.

Why? Because man is a being but too susceptible of uneasiness, and the more of it he can be saved from the better. But—the Almighty—is he a being susceptible of uneasiness in any shape? For my part, I cannot find any sufficient reason for believing him so to be: however, if on this point, the Cortes, by means of information received from those to whom it belongs to give it, have been more fortunate,—this point must be considered as settled. But, this point being supposed to be thus settled, then come two or three others. The Almighty being susceptible of uneasiness, and in particular of uneasiness produced by words employed by men, in speaking to or of him,—is it his Almighty will to be saved from such uneasiness or not? if yes, does he stand in need of any human power, and in particular of that of the Cortes, to give effect to such his will? if, on the contrary, it is his Almighty will *not* to be saved from such uneasiness, but to continue suffering under it, does it become the Cortes to endeavour to oppose their power to such his Almighty will? and if yes, does such opposition afford any considerable promise of proving effectual? Corresponding questions, in regard to the Saints; to whom also, meaning doubtless the departed Saints, the protection provided for the Almighty is, in Article 237, (I perceive,) extended. Having ventured so far as to submit to your view these questions, the answers I must be content to leave, which I do without reluctance, to the competent authorities.

These things considered—"*blasphemies,*" or "*imprecations,*" (Article 237,) or whatever else be the denomination given, to portions of discourse, by which, with or without production of uneasiness, offence has been supposed to be given to God, or to the Saints, or to both, —so long as they are confined to writing or printed books,—or to private conferences, not open to the public at large, into which he, to

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whom what is said is productive of uneasiness, entered of his own free choice, without being obliged to repair thither in prosecution of any matter of business;—to no such discourses, how revolting soever to myself, could I, if it depended on me, think of applying punishment in any shape. But, in a promiscuous multitude,—in a church suppose, a judicatory, or any other public building, or in a road or market-place, or a ship,—suppose such language uttered, uneasiness to *men* may be produced, and with it demand for punishment.

Whatsoever may be the justice—with which the above observations may be found to apply to offensive *audible* exhibitions,—with correspondent justice they will, I think, be found to apply to *visible* exhibitions: it matters not through what sense the wound passes to the mind, if the mind is wounded.

Whatever difficulty may have been produced in Gentlemen's minds, by offences styled offences *against* Religion, considered as commissible by individuals at large,—it is but a small matter (I should suppose) in comparison with that produced by offences *through* Religion: offences apprehended at the hands of that particular order of men, in whom, among you, the votaries of religion are wont to behold its special and little less than exclusively authorized guardians.

As to myself,—reference always made to the greatest happiness of the greatest number, —I beheld as issuing from this source two widely different mischiefs: the one *temporary* in its nature, the other *permanent*. 1. By the temporary mischief, I mean, that which consists in opposition made by this particular class of functionaries, to the government composed of all the other classes of functionaries: a mischief which, to the greatest number of the people, is great, in proportion as the conduct of the present government is, in a higher degree than that of the late, conducive to that same greatest happiness. 2. The permanent mischief is—that which I apprehend, from the junction of the body of the sacred functionaries with the profane ones: the junction, of the two particular interests of these two sections of the ruling few, into a body of particular and thence sinister interest, which will thereby be so much the more effectually enabled,—as, if the body be composed of men, it cannot but be as surely disposed,—to sacrifice to its own supposed greater happiness, the greatest happiness of the greatest number:—or, if *interest* be the word, the universal interest.

Supposing the old government to continue unrestored,—the temporary mischief, as above described, will be growing less and less every day, as the functionaries established under the old government drop off, and as the public mind grows more and more enlightened. In corresponding proportion will the permanent mischief take its place; and, when it has once swallowed up its present opponent the temporary mischief,—will remain in possession of the field, without anything, unless it be the spirit of the people, to oppose it. In a word, the temporary mischief is—superstitious influence: the permanent mischief, corruptive influence.

In the temporary mischief I see nothing very formidable: nothing but what, under the constitution as it stands, may admit of a remedy: an easy, a gentle, and an effectual remedy. This remedy, Sir, I shall proceed to submit to you: and with the less diffidence, considering how near on some points it comes to that which I see employed by the Committee.

For conciseness I shall put it into a form in some respects similar to what I should pursue in the penning of the correspondent part of a Code. But, I must beg of you not to consider it, as anything like an adequate sample of such a Code. To give to it anything like the precision and conciseness, that would be given to it in a regular work of that kind of which it would form a part, is altogether impossible. In any such fabric of my construction, the form of each part would be dependent on that of every other.

General description of the proposed remedy.

1. With the exception of ecclesiastical functionaries in general, and bishops in particular, addressing themselves in print or writing to the people within the range of their authority, in the exercise of their official functions,—leave to persons of all descriptions—ecclesiastics of all classes as well as others—the complete liberty of publishing whatsoever they please on the subject of religion, without exposure to punishment in any shape, or impediment to the circulation of such their discourses. N. B. Such,—only without the exception,—is the state of the law in the Anglo-American United States: and no mischief in any shape, —no such mischief as that of oppression by government, or disaffection towards rulers, or discord as between citizen and citizen through the instrumentality of religion,—is produced by it, or has place there.

2. On the part of an ecclesiastical functionary of whatever class, let the publication of any instrument,—on the face, or on the occasion, of which, either by his proper name, or the name of his function, he stands designated, either as sole author, or partaker in the authorship or publication, of such instrument,—designated whether in the direct way, or in any way howsoever indirect,—stand interdicted: unless and until it shall have received a license in writing, under the hand of a functionary of the temporal class:—say the political chief of the province.

In this case,—though the composition of the instrument is, as consistently with the religion in question it cannot but be, the sole act of the ecclesiastical functionary,—yet the publication of it may be considered as the joint act of the ecclesiastical functionary and the temporal:

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or a relative censorship may be considered as established, with the temporal functionary for censor. The operation is the same, in whichever light considered.

N. B. To this purpose must be considered—not beneficed ecclesiastics only, but all ecclesiastics whatsoever, regular as well as secular. For, it is—not only from special power or dignity, but from the sacred character common to them all, that their influence is, in the instance of each, wont to be derived. Co-extensive is the designation employed in the proposed Code, Article 213.

I. *Reasons for the general liberty.*

1. Against vexation to the feelings of individuals, security will be sufficiently afforded, by the above proposed interdiction, of discourse, visible as well as audible, and of all other objects of an anti-religious nature, if exhibited in any such manner as to be open, to eyes to which they are disagreeable.

2. Against mischief by the propagation of mischievous errors, security will be afforded, by the unbounded faculty of refutation, left to all persons in whose eyes they possess that quality: and, of inducement adequate to the production of such refutation, in so far as the nature of the case admits of refutation, no deficiency can reasonably be apprehended: if there were any, nothing could be easier to government, than the providing an adequate supply to it. See the Tract on the Liberty of the Press, and Public Discussion.

3. Any fear, real or pretended, of seeing the will of the Almighty, in this or any other particular, overpowered and frustrated by human agency, is too palpably self-contradictory and absurd, to be defendible:—or to be accounted for, otherwise than by long-continued custom produced in its origin by the union of force and fraud, with or without superstitious terror.

4. Of the fear of seeing the will of the Almighty frustrated, in the particular instance of the existence and extent of the religion of Jesus,—the groundlessness is moreover demonstrated by experience, in the case of the Anglo-American United States.

5. Of the fear of seeing the will of the Almighty frustrated, in the still more particular instance of the existence and extent of the Catholic edition of the religion of Jesus,—the groundlessness is moreover further demonstrated by experience, in the case of *Ireland*, as noticed above.

II. *Reasons, against every such attempt, as that of designating, for the purpose of punishment, the sort of supposed mischievous discourse, meant to be interdicted on the score of opposition to the existing government, on the part of ecclesiastical functionaries, speaking as such.*

1. Such designation is, as to a part of the extent, *needless*. In so far as such discourse has for its immediate tendency to engage men in the commission of acts injurious to person or property,—the offence is met by the laws applying to such offences, taken in their utmost latitude.

2. As to the rest of the extent, it is *impossible*. The above case excepted,—it is not possible to reach by any description, the sort of discourses in question, when emanating or appearing to emane, from any person invested with the consecrated character. Out of phrases, extracted either from the Fathers, or even from the Bible,—in a word, from any writings, whatever they may be, which in the religion in question are held as sacred,—out of phrases thus extracted, may be composed, by any one who shall think it worth his while, a *cento*, abundantly sufficient for any such mischievous purposes. Of the portions of discourse thus extracted and employed, the application thus made will be a misapplication. True: but the source from whence they were extracted will not have been the less sacred. Too great to be contended against, will be the difficulty of passing condemnation, on matter extracted from such sacred sources,—when *seen*, or believed to be, extracted by such consecrated hands.

3. Uniform conviction will be hopeless. Howsoever, in such a case, a judge, zealous to a certain degree on the side of the existing rulers, may be disposed to pronounce conviction,—a judge, inwardly hostile or less zealous, can scarcely be punished for not doing so. Such (says the obnoxious ecclesiastical functionary to the judge) is the interpretation put by me: if my interpretation is erroneous, does it belong to you—not only to put an opposite interpretation upon the sacred text, but to punish me, only because mine is different from yours! Then comes the judge and says to his superiors, Can you punish me, layman as I am, for not punishing, on the ground of its being a misinterpretation, an interpretation put by a consecrated person on these sacred texts!

As to the particular restraint,—note, in the first place, the assumption on which the demand for it is grounded: it is—that, from the class of persons in question, under existing circumstances, hostility to the new order of things is naturally to be apprehended.

Grounds for the assumption are these: viz.

1. Hostility, from this quarter, has actually been manifested to a very considerable extent.

2. It is but natural, and even, morally speaking, excusable,—that, having been admitted into their respective functions when the former order of things was in force,—they should, by sense of duty, and thence by reflection, as well as by particular self-regarding interest, be attached to it, and led to give support to it.

III. *Reasons for the restraint.*

1. Addition of what is wanting, to the perfect freedom of discussion, which, by the supposition, was meant to be established by the general provision relative to this subject. The power,—exercised over the judgment of the people at large, by means of the fears, derived from the source in question, and infused into their breasts,—is a power by which inward

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freedom of consideration is liable to stand excluded, and the mind to be rendered insensible to the force of argument on the other side.

2. From the freedom of discussion, no defalcation is thus made. Not even on the part of these functionaries themselves: since, for the giving support to their opinion, it leaves to them whatever liberty is possessed by any other citizen. They may give currency to whatever arguments they please, so as they do not make it known from what privileged source they come: the arguments will then operate with whatever rational force properly belongs to them, and no more.

3. *Exclusion of useless punishment.* If punishment were ordained to be applied to all such discourse, as, emanating from the quarter in question, shall, according to a description given of it, be deemed mischievous, it might, under the uncertainties above-mentioned, come to be now and then inflicted. This punishment, being upon the whole inefficacious, would be useless, and expended in waste: evil, produced without preponderant good.

Look, on the other hand, to the case, where the offence to which the punishment is applied, is the offence of publishing without the required license. In this case, the fact is so easily ascertainable, and so completely unexposed to dispute, that, by a presumption by no means unreasonable, it may be assumed that the offence will scarce ever be committed. If the instrument is not regarded as coming from the ecclesiastical functionary in question, it is not productive of the mischievous effect apprehended: as little is it, if, on being interrogated whether it has his sanction, he denies it:—if, on the other hand, he avers that it *has* his sanction, in this case, having by the supposition no license to produce, he plainly incurs the punishment. Under these circumstances, how small the probability is that a man should thus expose himself, is manifest.

True it is,—that, by this restriction, confined as it necessarily is to discourse in a written state, mischievous discourse from the quarter in question, not uttered otherwise than by word of mouth, is not reached. But,

1. For the repression of all *actual* mischief—all mischief in a tangible shape—all mischief, which is anything more than mischief in *tendency*—all mischief, in a word, which has for its subject-matter either *person* or *property*,—provision is made, by the general and standing laws, by which, acts mischievous to person or property are erected into offences, and, as such, made punishable.

2. The mischievous discourse in question being, by the supposition, not committed to writing,—the effect of it will be proportionately uncertain and transient.

3. In so far as any reports made of the purport of it find their way into print,—they will have to encounter the arguments, which,—on the side, that, by the supposition, is not only the right side, but the side which has the remuneratory power of government for its support,—cannot, as above shown, be reasonably expected to be deficient: and as, by the supposition, the mischievous matter will not be avowed by the functionary from whom it is reported to have come, they will not operate with more than their proper and reasonable force.

IV. *Punishment, proposed for promulgation without such license.*

1. Banishment, for a term to be limited, from every part of the Spanish territory.

2. Forfeiture of all ecclesiastical benefices situated within the Spanish territory, *i. e.* of the temporalities thereto belonging. N.B. If, by the ecclesiastical law recognised in Spain, any difficulty be opposed to such forfeiture,—for example, a difficulty as to the separation of the temporalities from the spiritualities,—this point will require to be settled.

3. In case of damage, produced to person or property, by means of any incitement, regarded as having been given by the unlicensed instrument,—obligation to make compensation for the injury.

Reason for article 1 *of the Punishment.*

Power of reoffending cut off in part.

Reason for article 2 *of the Punishment.*

Power of reoffending cut off in other part.

Reasons for article 3 *of the Punishment.*

1. The justice of the arrangement manifest to all eyes. N.B. But this supposes, that the connexion,—between the publication of the unlicensed instrument and the physical damage in question,—in the character of cause and effect, has been sufficiently ascertained.

2. Assistance necessary to the law more effectually secured: secured, on the part of the persons, whose subserviency is necessary to the execution of it: necessary—in the several characters of witnesses, and informers or prosecutors.

N.B. Capital punishment makes martyrs: a martyr may be more mischievous after death than during life. Neither by banishment,—nor by forfeiture of the ill bestowed invitations to idleness and anti-christian luxury,—nor by obligation of making amends for injury,—nor by all together,—is any such instrument of good or evil as *a martyr* manufactured.

V. *Punishment for the Political Chief, in case of his giving a license to an instrument of the sort in question, which, in respect of the mischievous tendency imputed to it, shall have been deemed unfit to receive a license.*

In case of actual damage produced to person or property,—obligation to make compensation:—as in the case of the ecclesiastical functionary, as above.

N.B. If, in the case in which no such damage has been produced, it be thought fit to apply punishment to the case of the temporal licensing functionary,—a description of the nature of the offence, committed by the improperly licensed spiritual functionary, will require to be given: a description, the difficulty of which has been above brought to view. But, in com-

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parison with the peril that has place in the case of the improperly licensed spiritual functionary,—the utmost peril, that can have place in the case of the licensing temporal functionary, is very inconsiderable. The inducement, by which a person in the situation of the ecclesiastical creature of the former government is naturally stimulated to the commission of the offence,—has no place in the situation of the temporal creature of the new government by which the former government has been supplanted. Whatever therefore be the description given of the offence,—very inconsiderable is the probability, of its being, in any such situation as that of the temporal functionary in question, ever committed.

Suppose even that, in the text of the law, no penalty is attached to the supposed mischievous conduct in question, on the part of the temporal functionary,—even in this case, the requisite means of repression will scarcely fail of being applied. For this purpose, the power of removal, belonging to the superiors in the executive department, might, it should seem, suffice.

VI. *Punishment for the Political Chief, in the case of his refusing a license to an instrument of the sort in question, to which it is thought a license ought not to have been refused by him.*

In this case, there seems not to be any adequate demand for punishment. The situation in question would be too perilous,—if, for two offences of an opposite nature,—one of them so difficultly susceptible of precise description—punishment were thus menacing a man on both sides.

To put an extreme case. Suppose the result to be—that, from the quarter in question, no written instrument of the sort in question ever emanes. The greatest possible evil that could result from such deficiency does not present itself as very serious. From the same quarter there would remain, in unlimited quantity, in the oral form, instructions to any effect wished to be communicated, and in the written form, instructions equally unlimited, so it be in an anonymous state:—in that state, in which it will carry with it, no more indeed than the weight, but yet all the weight, that properly belongs to it.

VII. *Reason for the proposed temporariness of the restriction.*

1. Restriction, howsoever applied, being so much evil,—ought not to stand applied, but in so far as it has the effect of excluding evil to a greater amount. For the exclusion of the evil in question, the most perfectly effectual course would be—to continue the restriction so long as any one functionary, admitted into the order in question under the former state of things, continued alive. But, were the duration given to it thus protracted, the restriction would continue long after the need of it had ceased to exist. Threescore, or as far as fourscore years, might be the duration of it. Even supposing unabated hostility sure in the instance of every one of them,—it is not by one, nor by a small number, that in this way any considerable mischief would be produced. In a torch, though lighted, there is nothing dangerous,—except in so far as combustible matter, in a quantity sufficient for mischievous effect, is within reach of it. Say then in ten, say in twenty—say at the utmost in thirty years,—with the hope, even the desire, of producing mischief in this shape, it seems reasonable to believe, would be effectually extinguished: if not in all, at any rate in so large a proportion of the whole number, as to leave the rest in a state of sufficient impotence.

I was about to speak, somewhat at large, upon the *permanent* mischief, in regard to which gentlemen of the Committee are so much at their ease, and your humble servant so full of apprehension: I had even written more than as much again as, on the conclusion of this Letter, you will now have been troubled with. What has saved you is—the recollection, that in the composition of the mischief in question, the mass of the matter of corruptive influence in the hands of the clergy is but one element out of a number: and that therefore, under the head of Religion, discussions on this subject would not have their proper place.

I will not attempt, Sir, to take up any more of your time, by offering to your view the points of difference and the points of agreement—for points of agreement on this subject there are—between your Honourable Colleagues, and your troublesome correspondent. There would be no use in it: and, when confronted, the passages will, I hope, speak sufficiently for themselves.

By one thing or other, I have thus been insensibly led, to the obtruding upon you, as it were by a side wind, something like a sample, of the manner, in which,—in a Code furnished with a *rationale*,—the principle of the greatest happiness of the greatest number, would be applied to the several particular cases: the several elementary ingredients of the great compound—I mean the probable feelings of all individuals concerned—being, to the best of the operator's ability, looked out for, set down, numbered up, weighed and measured. Inadequate in a lamentable degree must unavoidably be any such sample. In an entire work of this kind, constructed in pursuance of an uniform design, that degree of condensation is practicable, which in any part taken by itself is impossible: condensation—a quality in this case so indispensable—to precision, comprehensiveness, and consistency, as well as notification. On the same subject,—you and your honourable colleagues, Sir, have before you a work, of which, in this place, I need say no more, than that, compared with their proposed Code, it is a different one. The eyes of "cultivated Europe"—Yes, and of the so much better cultivated America—not to speak of that which is beginning to be cultivated—are fixed upon you. You will make your choice.

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And now at length, Sir, a period is put, to the course of continually increasing vexation,—which, by the philanthropic and spontaneous zeal of a common friend, has,—such have all along been my apprehensions,—been unawares imposed upon you, at the hands of your not the less sincerely respectful correspondent,

JEREMY BENTHAM.

SUPPLEMENTAL ADVERTISEMENT.

In the preceding Advertisement, some account was undertaken to be given of the effect of these Letters, so far as regards the honourable gentlemen at whose instance they were written, and the other honourable gentlemen who has been seen bearing a principal part in the drawing up and ushering in the important work which has been the subject of them.

Letter after letter went, and no acknowledgment came of the receipt of them. The Count's residence at Paris being but temporary, and no address having been given to me, the course I had taken was—after directing the letters *To Count Toreno at Paris*, to add in French, To THE CARE OF *the Spanish Mission*. At this time, fortune favoured me so far, as to station at Paris, a correspondent on whose punctuality I could depend:—Miss Frances Wright, author of that so justly admired and pre-eminently interesting work—*View of Society and Manners in the American United States*, a second edition of which has, at the end of a few months, just succeeded the first. At my request, that lady did me the favour to see the Count, and deliver into his hands, a letter of which the following is a copy:—

Mr Bentham to the Comte de Toreno.

QUEEN'S SQUARE PLACE, WESTMINSTER, *Sept. 18th*, 1821.

SIR,—This goes to you, I hope, by a private hand. In obedience to your commands, as signified by your letter of last month, and in consequence of your obliging present received on the 22d, I addressed to you by the post on the 11th of this month, the first of six intended letters, and on the 14th, the greater part of the second: the conclusion of the second I shall send this night by the post, not being able to finish the revision of it time enough to send it by the present private conveyance. The third and fourth will follow it in a very few days more. In the first or second of these letters, reference is made to two pamphlets, which Miss Wright, a young lady who was going from hence on a visit to General La Fayette, was kind enough to take charge of. It would be a great satisfaction to me to hear that anything of all this has been received by you, *as likewise to receive your directions respecting the course to be taken for the conveyance of the remaining letters.** Your letter to me not containing any directions on this subject, nor being dated from any street or other place at Paris, I could think of no course so proper, or so likely to succeed, as that which is expressed in the direction given to this letter, and which direction I have accordingly pursued in every instance. To Miss Wright, I gave in charge nothing more than the pamphlets in question, not having at that time been able to decide what course my letter to you should take. Understanding that the Cortes were to meet to do business so soon as the 24th of this month, I should not have sent a letter to you at Paris thus late in the month, but for those words in which you say in your letter "d'ici aux derniers jours de Septembre, que je dois retourner en Espagne." With the truest respect, I am, Sir, Yours,

JEREMY BENTHAM.

Under these circumstances I could not help considering myself as being in no inconsiderable degree indebted to Miss Wright for the Spanish letter underneath, of which the following is a translation:—

PARIS, *September 26th*, 1821.

SIR,—Perceiving from the quotations in your three valuable letters, the acquaintance you have with the language of the nation I belong to, I employ it on this occasion, in preference to any foreign one; following in this particular the example you have set me. Never should I have thought of making any such attempt upon your time, had it not been for my friend Mr Bowring, and the assurances he gave me, that you would with pleasure do whatever it might lie in your power to do, in compliance with any request, which, for a purpose such as that in question, I might be disposed to make to you. Under this assurance, it seemed to me that I could not have a more favourable occasion, for addressing myself to the illustrious writer, the celebrated Mr Bentham, whose works have spread so much light over the field of legislation, and thereby made such large contribution to the welfare of mankind.

I see, however, that the extent of the subject, and, above all, a sort of distrust on your part as towards the functionaries who consult you, have given their colour to your mode of complying with my request; although it does not appear to me that "the individual thus consulted" should have seen grounds for distrusting "the functionary consulting."

The latter of these will, with pleasure, quote with due respect the person by whom he is

* This satisfaction I was not destined to receive.

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thus honoured: it accords not with his principles or his habits to attempt to gain reputation by hiding, diminishing, or appropriating to himself the merits of other men. With that urbanity which from such a quarter could not but be expected, it has been your care to avoid including me in any such imputation: I mean, by the testimony you give to the fact, that I have not the honour of knowing or being known to you, or of ever having written to you: by this testimony, coupled with the intimation of your opinion, that there was nothing about me that could have given room for any such particular distrust on your part towards myself. Be assured, Sir, that I am duly sensible to the value of the expectations you hold out to me, of your having in hand a work on this same subject. Not less so am I to the justice of those already published observations of yours, of which certain articles in our constitution are the subjects, confirmed as it is to me, by those which a pretty extensive course of experience has led me to make on the practice of legislative bodies. The non-re-eligibility of deputies is a most serious evil; detrimental, as it so manifestly is, to that stability and consistency which are so essential in men's proceedings in general, and more particularly in such in which the public interest is concerned. Although my first letter was not written under any such expectation as that of its meeting the public eye, you have not the less my free consent, Sir, to send it to the press, so as the present letter be an accompaniment to it.

It is with great pleasure that I shall always receive any such communications as you may be pleased to make to me: persuaded as I am, that whatsoever labour may have been employed upon them will not be labour lost.

I am, Sir, &c.

(Signed) El Conde de Toreno.

P.S. Miss Wright has the goodness to take charge of this letter for you.

Mr J. Bentham.

Paris, *Septembre* 26, *de* 1821.

Mui Senor Mio,

Viendo por las citas que VMd hace en sus tres apreciables, lo bien que entiende el espanôl; prefiero escribirle en mi lengua á valerme de otra extraña, siguiendo en esto el exemplo de VMd. Nunca hubiera yo molestado su atencion, ni atrevidome á distraerle de sus importantes tareas, si nuestro amigo Mr Bowring no me hubiera animado á ello, manifestandome el gusto conque VMd satisfaria mis deseos—En virtud de esto nada crei mas oportuno en el asunto de que se trataba que dirigirme al escritor ilustre, al célebre Mr Bentham, que por medio de sus obras habia procurado en materias de legislacion, difundir ideas luminosas y contribuir de este modo al bien de la humanidad—Veo sinembargo que lo extenso del asunto, y sobre todo un cierto género de desconfianza que tiene VMd en los funcionarios que consulta, le han impedido contestar à lo que le preguntaba, si bien nada hubiera tenido que recelar del *functionary consulting* el *individuo thus consulted*. El primero citarà con gusto la persona que le ilustre, no fundando su gloria en ocultar, disminuir, ó quitar, el mérito de las demas—VMd con la urbanidad propia de hombre tan distinguido, no me comprehende en su asercion; y en verdad no habiendo tenido la honra de conocer antes à VMd, ni de escribirle directamente, como VMd mismo nota, no habia antecedente alguno que diese lugar a esta desconfianza.

Aprecio de todos modos la promesa que VMd me hace de una obra que acerca de esta materia escribe.—Asimismo estimo las observaciones generales sobre algunos articulos de la constitucion; entre ellas hallo algunas bastante justas, segun lo que me ha enseñado una larga experiencia de lo que son los cuerpos legislativos—La no-re-eleccion de diputados es un grave mal, pues falta aquel principio de estabilidad y consequencia tan necesario en todos los asuntos, y sobre todo en los de publico interes.

Aunque mi primera carta no fué escrita con el obgeto de que viese la luz publica, es VMd mui dueño de imprimirla con tal que imprima igualmente esta que ahora le escribo.

Tendré siempre mucho gusto en recibir las observaciones que tenga VMd à bien comunicarme; y estando seguro de que no serán sin fruto me ofrezco de VMd at° seg° serv° L. B. S. M. El Conde de Toreno.

Miss Wright tiene la bondad de dirigir à VMd esta carta.

No other acknowledgment, nor any further instruction arriving,—on the 11th of October, I sent for Madrid by the post the following Letter, directed "A Monsieur M. le Comte de Toreno, &c. &c. &c. Madrid."

Oct. 11, 1821.

A Monsieur M. Le Comte de Toreno, *&c. &c. &c.*

Sir,

Circumstances considered, it seems to me that there may be a use, in my making this second acknowledgment of the honour done me by your second letter bearing date, Paris, Sep. 26. The first acknowledgment was made in a postcript to letter the 4th, being the 3rd of the series of letters announced in letter 1st. Whether, besides that 1st letter, you had, before your leaving Paris, received any others, I cannot be sure: though, from a passage in your above-mentioned 2d letter, I am inclined to think you had received one at least:* of the 6 sent or announced as above, 4 have already gone to Paris at different times, all of them directed in the same words as the one of which you mentioned the receipt: so likewise a part of letter the 5th. The whole, or near the whole, of the remainder, will go to-morrow (Friday);

* This doubt was a misconception of mine: the Count's Spanish Letter acknowledges three.

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letter 6th, which at present at least is but a short one, will follow it the next Paris post-day, which is Tuesday Oct. 16: and, the same day or the next, the supplemental letter on Religion (letter 7th) announced in one of the preceding ones. I am, Sir, with all respect, your obedient servant,

JEREMY BENTHAM.

P.S. The following are the days on which the several letters were sent to our London Post Office.

1821. Sept. 11th, Letter 1.
Sept. 14th, Letter 2 (first part.)
Sept. 18th, Letter 2 (last part.)
Sept. 27th, Letter 3.
Oct. 2d, Letter 4.
Oct. 15th, Letter 5 (first part.)
Oct. 10th, Letter 5 (last part.)

The honourable gentleman speaks of distrust: of distrust on my part: and, as in his situation would very naturally be the case, seems to be not altogether pleased with it. Distrust on my part! O yes: *that* there was: distrust not entertained only but declared: the reader may have observed how explicitly declared. It is for this distrust that I see a sort of *action* brought against me in the *Court of Public Opinion:* though, such is the honourable plaintiff's candour, I cannot complain of the rate at which the damages appear to be laid. To this action, such as it is, my pleas are—in the language of English law—*Not guilty*, and a *justification*. 1. Not guilty. For,—the object of this distrust of mine—what is it! Not the individual, but the genus and the species:—*man*, the genus; *statesman*, the species: and, such as the imputation is, we are—both of us—not he the plaintiff alone, but I the defendant also—declaredly included in it. I will even go further—I aver even *ultrà-innocence*. If, on my part, in a case like this, the eye of suspicion could have been closed, in few instances could it have been so nearly so, as in the present. I turned in the first place to the Cortes at large. In the instance of these real representatives of the Spanish people, when compared with the sham representatives of this and that other nation, I could not but see a ground for comparative confidence—appropriate confidence—a ground alike obvious and incontestable. In the instance of Count Toreno in particular, this ground presented an aspect of peculiar strength. Him alone I saw breaking through the trammels of national vanity, and national prejudice. Him alone I saw looking round for useful information: looking to whatsoever quarter presented a chance of furnishing it. To whatever presumed source of information the call for it had been directed, the magnanimity manifested by such a call would have produced, in my mind, that degree of appropriate confidence which was so natural: and whether, by the consideration of the individual source applied to, that confidence could have been lessened, any one may judge.

So much for *not guilty*. Now for *justification*.—Suppression—suppression, to an amount more or less considerable—is charged, as having, in the passages complained of, been stated, as an undesirable, but at the same time a too certain result,—supposing the correspondence not submitted to the public eye. Such then being the alleged probable, what has been the actual, result! This security against suppression—such security as is afforded by the assurance of future publication—this security, as far as it goes, has been obtained; and still, so far as has depended on the honourable complainant, suppression has actually been the result: suppression, not partial only, but total, in the only place in which publicity could have been productive of any immediate effect on practice. Of the seven letters which the reader has before him, *three* (he has seen) have been acknowledged. But he has moreover seen—how and by what means they were caused to be acknowledged: fortune having, in the manner that has been seen, favoured me, and conveyed through the Count's key-hole, a sylph, to whose questions a *yes* or a *no* could not be refused. It is moreover to her account that my suspicion cannot forbear placing that same license, whereby publication stands authorized. Since that day, (Sept. 26th, 1821,) neither in black and white, nor by word of mouth, has a syllable from him on the subject been extractible. The letter, with which he was presented, or at least endeavoured to be presented, upon his return to Madrid, the reader has seen likewise. Mr Bowring, by another such favour of fortune, was sent to meet him there. Have you seen the Count! What has he received! What says he to it! To questions to this effect, put by me to my friend, an answer could not be refused. One alone could be given—*Invisible*. Invisible! How so! unless that, by the Count, my good genius, though so lately his own likewise, was now taken for his evil genius!

Thus it is, that in the case in question, while all use to the Spanish nation was dependent upon and proportioned to publicity,—on the one part has been seen exertion for the securing of it, on the other part silence and secrecy, continuing from beginning to end.

In letter sixth, may have been observed two concluding questions put to the Count. 1. Think you, Sir, that, without any interposition on your part, circulation will be permitted to these letters! 2. If not, will your influence be employed in the endeavour to procure a permit, or at least a connivance, for the article you have been pleased to bespeak of me! Still, for answer, silence: and in such a case, silence (it need scarce be said) is a negative. Now as to the effect of this same negative. Nor yet, if report be to be credited, is silence on his own part the only instrument of suppression my honourable correspondent has at his command. In Madrid, as elsewhere, sits a Board, for the securing of whatsoever requires

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to be secured, in relation to the press: on the part of all constituted authorities, good conduct, at all times, and in every shape: and for this purpose—for there, as elsewhere, such are the means employed—concealment of every such instance of bad conduct, as may at any time have had place. For a gilding to the pill, here as elsewhere, *Jury*, if I mistake not, is the title conferred upon this Board. At Madrid, report gives to Count Toreno the direction of this instrument: and such is the hold taken upon men's minds by this apprehension, I am assured that, should it happen to any of these letters to make their appearance at that chief seat of Spanish liberty, amendments adapted to existing circumstances must and will, in the first place, have been made in them: so that, to an extent more or less considerable, what I am thus seen to have said will be—not what I *have* said, but what I *ought* to have said.

All this while, let not injustice be done, in any shape, to my honourable correspondent. On nothing which he has done or left undone, is any breach of promise chargeable. What he promised, was—that he would *himself* pay attention to what he received from me: what he did *not* promise, was—that any one else should have it in his power to do so.

Curious enough, unless my information is substantially incorrect, is the contrast exhibited by the effect of these Letters on the two most conspicuous characters in the Cortes,—Count Toreno, and M. Calatrava: that Mr Calatrava, who, on the occasions of greatest importance, has been seen taking the lead. "Yesterday," (says a private Madrid letter of Dec. 17,) "Yesterday, Calatrava made, I am told, a most eloquent eulogium on 'the illustrious, the learned, the *humane* Bentham.'" How different this result from anything that could naturally have been expected! In the case of my honourable correspondent, gratitude for the distinction conferred on me, added to esteem for the liberality manifested by an application such as hath been seen, could not but concur in giving a certain smoothness to every passage, by which, in the course of the discussion, his individuality was brought to view. In the case of the chief penman of the Projected Code,—after every smoothing-iron that presented itself had been employed, necessity still gave to everything an irremediable asperity. Far indeed from pleasant to the author of the Letters was the invidious office, which, as the work advanced, after the promise of it had been made, the nature of the case was seen to have forced upon him: the office of *mischief-maker* between two colleagues. Never accordingly was sympathy more sincere than was mine, as often as the predicament, in which the two great statesmen had been placed by me, offered itself to my view. But, on the one hand, on a point of the most extensive influence, stood the interest of the whole Spanish nation: not to speak of so many other nations in the background: on the other hand, the transient feelings, of two individuals, whose situations could not but be frequently exposing them to similar ones.

As to Mr Calatrava's knowledge of the treatment he had been receiving at my hands,—it is scarce necessary to observe, that, while Count Toreno was sitting at his elbow, and it was known to other members of the Cortes that a Spanish translation was in hand, few things could be less improbable, than that anything which the honourable gentleman was disposed to know of the matter, should be unknown to him. The more than friendly language, in which, as above, the author of the provocation was spoken of—spoken of by him who was the object of it—should be present to the reader's mind, as often as any of the particulars, by which the provocation was given, present themselves to his eye or to his memory. Yet have I seen a letter (it was indeed from a fellow-countryman of his, and a declared adversary) in which this forgiving statesman is charged with being of the number of those, who do not bear their faculties altogether so meekly as could be wished. Magnanimity—prudence in this or that shape—to which of these two virtues, or to a happy mixture of both, shall so rare and exemplary a return of good for evil be ascribed? To the Hermit at London in his hermitage, all this matter is perfectly opaque: at Madrid it is perhaps transparent.

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SECURITIES AGAINST MISRULE,

ADAPTED TO A

MAHOMMEDAN STATE,

AND PREPARED WITH PARTICULAR REFERENCE TO

TRIPOLI IN BARBARY.

NOW FIRST PUBLISHED FROM THE MSS. OF

JEREMY BENTHAM.

NOTE BY THE EDITOR.

THE papers from which the following pages are extracted bear different dates, ranging from August 1822 to February 1823. With the exception of the matter of Chapter IV., the originals are in detached masses, to which the Author does not seem to have applied any system of arrangement: probably owing to the circumstance that the work was abruptly interrupted, either because he found it could not be immediately applied to practical use, or for some other cause. The value of this fourth chapter, which contains the securities *in terminis*, is in the skill with which it is adapted to the uses of any reforming and enlightened monarch of a Mahommedan and semi-barbarous country, who may wish to give his subjects the utmost advantages of a civilized and constitutional government, which he can convey to them without resigning his own authority or infringing on the religious observances and national habits of the people. The other chapters will be found to contain,—a short analysis of the forms which misrule adopts under arbitrary governments; a demonstration that any remedies that may be adopted must depend for their efficacy and existence on the force of public opinion; an account of the manner in which that force may be brought to bear most efficaciously in such a direction; and a calculation of the chances which any such project as that propounded has of being sincerely adopted. Besides the papers here printed, there are in the same collection many others having particular reference to the state of the Pachalic of Tripoli, and to individuals connected with its government at the time when the author wrote. Finding these to possess only a local interest, which the lapse of time has materially diminished, the Editor considered that the better course would be to omit them. The information contained in them was furnished by Hassuna D'Ghies, Ambassador from Tripoli to London, at whose request, indeed, the Author had entered on the subject. This man had, by his amiable disposition, extensive accomplishments, and singularly enlightened political views, endeared himself to many Europeans, who have lately had to lament his sudden death, under circumstances which caused a suspicion that he was poisoned. He was about thirty years old when he became acquainted with Bentham, and had been eight years resident in Europe. On his return to the East, he became Editor of the Newspaper published at Smyrna by the Turkish Government.

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SECURITIES AGAINST MISRULE.

CHAPTER I.

PRELIMINARY EXPLANATIONS.

SECTION I.

The word Securities: its superiority to others used for the like purpose.

GENERALLY speaking, legislative arrangements that have been established, or endeavoured to be established, for the security of the governed against the governors, have, for their success, trusted to force actually in hand: if not to force in a state of independence, as in the Anglo-American United States, at any rate, to force in a state of resistance, as in England, in the Petition of Rights under Charles I., and the Bill of Rights, passed on the transference of the Crown from James II. to William III.: and in France, in the Déclaration des Droits de l'Homme, passed by the earliest of the successive national assemblies.

This sort of title has in itself one radical defect: it presents no conception of the object which it has in view. The object which it really has in view is, as here expressed, the affording to the governed security against misrule—that is bad government—on the part of the governors. Nothing can be clearer than the meaning given of the word *security:* nothing for the present purpose can be clearer than the meaning given to the words *bad government:* or, as their signification is expressed by a single word, misrule.

When, instead of the word *securities* and *misrule,* you employ such a word as *right,* a cloud, and that of a black hue, overshadows the whole field. The attitude you take is restless, hostile, and uneasy. You show that you are in discontent, but you show no clear grounds for your discontent. What you give intimation of—though even to this no explicit expression is given, is—that some rights of yours have been violated, and that a determination has been formed by you not to sit still and see them violated any longer. But these rights, the violation of which is thus declared—from what source is it that they are derived? To any such word as right, no other conception can ever be attached but through the medium of a law, or something to which the force of law is given: from a real law comes a real right; from an imagined law nothing more substantial can come than a correspondently imagined right. Lay out of the question the idea of *law,* and all that you get by the use of the word *right,* is a sound to dispute about. I say I have a right: I say you have no such right: men may keep talking on at that rate till they are exhausted with vociferation and rage; and, when they have done, be no nearer to the coming to a mutual conception and agreement than they were before.

On the other hand, if no demand for security against misrule can have place, until and except in so far as some law is violated, no such security can possibly be obtained in the case in which it is most needed: for the case in which it is most needed is that, in which, the laws being altogether at the command of the rulers, the very work of their hands, no violation of law can be needed for the accomplishment of the misrule: on the contrary, the more frequent and extensive the violations of the law are, the more extensive is the mitigation thus given to the evil, for the production of which they were established.

By the phrase—securities against misrule, all this perplexity is avoided.

But the great advantage of it with reference to practice is—that it is employable, and with equally indisputable aptitude, in every state of the society: whatsoever is the condition of the governed under or in relation to the governors. It may be employed by a sovereign representative body, on the occasion of the establishment of the constitution of the state. It may be employed, not only under a monarchy, but by a monarch altogether absolute, unless in so far as by the arrangements in question a limit, or at least a sort of bridle, to his authority is regarded as being applied.

For the subjects to say to the sovereign,—This or that is our right—say or do what you will—is as much as to say, you are no longer sovereign. For the sovereign to be made to say—You have such and such a right as against me, or I have not such and such a right as against you, is as much as to say, I am no longer your sovereign.

On the occasion of the here proposed arrangements, the course taken is—to put them in such a form that, with the government still in the state of an abstract monarchy, they may possess whatever chance of acceptance can, in the nature of the case, be possessed by any arrangements of the same or equally effectual import, aiming at the same object: but if, even in so unfavourable a state of things, a paper in this form may possess a chance of acceptance answering its wished for purpose,—in proportion as the state of things is more and more favourable, its aptitude will be still less and less exposed to doubt.

That, otherwise than by fear of evil, a sovereign can be brought in any way knowingly to tie up his own hands is, generally speaking,

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too much to expect. But what without such fear he may perhaps be brought to consent to —with less reluctance at least, is, to tie up in the way in question the hands of his agents: in which case matters may be so managed, as that without knowing it he may thus be made to throw obstacles in the way of his own steps, in so far as they proceed in a sinister direction.

Section II.

Misrule defined and explained.

Misrule is bad government: it comprehends whatsoever is opposite to good government. A government is good in proportion as it contributes to the greatest happiness of the greatest number; namely, of the members of the community in which it has place. Rule may therefore come under the denomination of misrule in either of two ways: either by taking for its object the happiness of any other number than the greatest, or by being more or less unsuccessful in its endeavours to contribute to the greatest happiness of the greatest number.

No government having anywhere had place that had for its main object any other than the greatest happiness of those among whom the powers of government have from time to time been shared, all governments that have hitherto had existence have had more or less of bad in them. Of all governments, the worst have uniformly been those in which the powers of government have—all of them—been in the hands of one; because in that case such government has had for its object the greatest happiness of that one member: and to that object the happiness of all the other members has of course been made a continual sacrifice.

Take any government whatever: by rendering it less bad than it is, whatsoever means are capable of being proposed or so much as thought of, are reducible to one or other of two heads:—1st, arrangements by which a change will be effected on the form of the government; 2d, arrangements by which a check will be applied to the power of the ruling functionary or functionaries without any such change. Arrangements which belong to the first of these heads constitute a seperate subject of consideration. The set of arrangements herein proposed under the notion of their serving more or less in the character of securities against misgovernment otherwise called misrule, require not any such changes. The supposition on which they are grounded is that by one means or other, without any such change, the ruler or rulers may, by one consideration or other be induced to lend their power, to the purpose of giving them the sanction of law. Not therefore to misrule in every shape is it in the nature of the here proposed arrangements to apply a remedy; at least in a direct and immediate way. Not to misrule in any of those shapes in which it bears upon the members of the community in an undistinguishable mass: not, for example, to lavish expenditure, and to unnecessary and therefore unjust war; evils, towards obviating which, nothing can be done by any means other than a change in the very form of government. To those cases alone has it any direct and immediate application, in which the evil comes home to the feelings of particular, and those determinate, and in each case assignable individuals.

Considered in its application to assignable individuals, misrule may be termed *vexation*: the persons considered as the authors of it being persons clothed with power, the vexation may be termed *oppression*. In so far as from the burden thus imposed, benefit in any shape is received by the authors, or by any whom they are in this way disposed to favour, the oppression is *depredation*.

As to the authors, though to a boundless degree, and in a conspicuous and avowed manner, the only persons in whom oppression and thence depredation can have for its authors are those by whom in the state in question the supreme power is possessed, yet to a great and indeterminate amount, not only their several subordinates—instruments of, and sharers in, that same power—but the rich in general possess as such, and to an amount rising in proportion to their riches, in addition to that *desire* which is in all men, the *faculty* of giving birth to those same evils.

The shapes in which vexation is here attempted to be combated, are not all the shapes in which the evil is capable of showing itself: for against these thus taken in the aggregate, security more or less effectual is already in every country taken, and must therefore, in the country in question, be on the present occasion supposed provided by the existing laws. Calumnies, for example, or personal injuries, or injuries to mental or personal rights, are among the subjects not here taken on hand, as being of such a nature that the particular remedies here provided are either needless or inapplicable, with relation to them. The only vexations belonging to the present purpose, are those which, on those over whom power is exercised, are in a particular manner liable to be inflicted by those by whom the same power is possessed. Meantime these being the same persons, at whose disposal everything is that bears the name of law, to seek to afford, by means of new laws, security against those persons: to seek to afford, by means of new laws, security against those at whose disposal those laws will be when made, is an enterprise which, to a first view, can scarcely fail to wear the face of absurdity. As well, may it be said, seek to obtain security against the attacks of an armed man, by means of other arms placed in that same man's hands. Such (it must be confessed) would be the absurdity, if it were necessary that the armour, in the manufacturing of which he will be requested to concur, should be armour of the offensive kind, or even of the effectually defensive kind, and that intended to be in any manner employed against himself.

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But on his part this conception is not a necessary, nor altogether certain one. Against depredation and oppression, from which he derives not, in any shape, any benefit—against depredation and oppression, exercised by, and for the benefit of, the rich in general, or by even his own instruments, and other subordinates in particular, it may happen to him not to have any strong or determinate reluctance to see a tolerably essential security provided: and as against any oppression which it is, or may have come to be, his pleasure to exercise, what may happen is—that it will not be very plainly visible to him, how it is possible that any supposed security can in reality be efficacious. But more of this when the proposed remedy, together with the evil in all its shapes, have been distinctly brought to view. Whatsoever may be the chance which the here proposed remedy affords of being productive of the wished effects, the smallness of it affords not any ground of objection to it: for, under a monarchy, such being the nature of the case, as not to admit of any other, the option is—this or none. The great difficulty is in obtaining the concession. Should that point be accomplished, its efficacy to no inconsiderable degree need not be despaired of. Abundant are the instances, which history affords, of concessions having the same object: some in which the engagements taken by these concessions have been grossly and continually violated. Still, however, there is sufficient reason to think, that without this safeguard, such as it was, the instances of oppression would have been still more numerous and afflictive. The charters by which the concessions were expressed, afforded a determinate standard of reference—a rallying point. If, even in this case, paper, when employed in the character of a breastplate of defence against the sword, was not altogether destitute of efficacy, still less need its efficacy be despaired of in the present case: for in none of these instances was any such attention applied to the making the most of the only possible remedy, as will be seen employed in the system of arrangements here proposed.

Section III.

Misrule—its Shapes.

The here proposed system of arrangements has for its object, as above set forth, the applying, to such of the evils as are most apt to be produced by the immediate agency of the Monarch, or those in authority under him, such remedies as present the least unpromising chance of obtaining the application of them at his hands.

One word—*misrule*—will serve for conveying a general conception of the disease: another word—*publicity*, for conveying the like conception of the remedy: the only remedy which, (it will be seen,) without a change in the form of the government, the nature of the disease admits of.

Thus much for a general conception. But, under both heads, some explanations present themselves as necessary: necessary, in the first place, for rendering the ideas clear and determinate: in the next place, for showing that it is to this one *recipe*, *publicity*, that relief, in every shape in which the nature of the disease admits of it, is referable. Some observations will follow, in the view of showing in what way application may be made of it to most advantage; having for their object the showing what the chance is, that the remedy will be found obtainable.

First, as to the shapes in which the evil is capable of presenting itself.

Shape 1. Sufferers all determinate: the individuals all determinate and assignable. Examples—Homicide, confinement, banishment. In the aggregate of this suffering, consists the evil of the first order: for distinction's sake, it may be called purely private.

Shape 2. Sufferers, altogether indeterminate. Examples—Waste of public money: act of engaging in an unnecessary war. In this case, the evil may be called purely public.

Shape 3. Immediate sufferers determinate, but the greater part of the evil composed of the sufferings of individuals altogether indeterminate. Examples—1. *Political Gagging*: i. e. obstructing in any way the communication between mind and mind, for the melioration of the common lot, on any subject of discourse; more especially on a political subject. 2. *National debilitation*—weakening the means of defence and security, in the hands of the people, against injury at whatsoever other hands, those of the rulers themselves not excepted. In this case, the evil may be said to be *mixed*; or public through the medium of private. Through the sides of one individual the public is wounded: that is to say, all other individuals are: as well those who do not feel the wound, as those who do.

Under the general name *vexation*, may be included every political evil, in so far as the consideration of it is confined to the sufferings of determinate and assignable individuals: namely, the individual persons who are the immediate sufferers by the individual mischievous act in question.

Oppression is *vexation*, considered in so far as the hand of power is considered as occupied in the production of it. Thus, if inflicted without sufficient warrant, *i. e.* without being necessary to the preserving the community from evil of still superior magnitude,—*homicide*, *confinement*, and *banishment*, are,—if produced by a hand not armed with legal power, acts of vexation simply, if by a hand armed with legal power,—if for example by the hand of the sovereign, acts of *oppressive vexation*, or in one word, *oppression*.

In oppression by the hands of rulers, two stages are discernible, and require to be distinguished. By oppression in its *first* stage, the disease is produced as above. By oppres-

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sion in the second and last stage, the remedy is excluded, or endeavoured to be excluded.

By the same act, whereby oppression in this its last stage is exercised, oppression in the first stage may also be exercised: it is so in most instances, in those several cases, in which the evil has been spoken of as being of a mixed or public and private nature: the afflicting hand wounding the public through the sides of individuals. Examples—1. *Political gagging;* 2. *National debilitation*, as above.

In so far as the suffering, by loss or otherwise, to the party vexed and oppressed, is attended with profit to the oppressor or other vexer, or any one whom it is his design thereby to favour, *oppression* has the effect of *depredation.**

Thus it is, that, in the case where a community is plundered by its rulers, by the support given to an unnecessary war, suppose two such wars, and the sums extorted for the purpose of the war the same in both, the one in which depredation to the greatest amount has had place, is thus far the least mischievous.

If, during the course of the war, a million of money is paid for gunpowder to the makers, better it is for the community that the half of it be put in the shape of profit into the pocket of the makers, than that the whole be converted into gas, producing or not producing the destruction which it was intended to produce.

Only to aid conception are the above suppositions put: for, how far they are from being ever exemplified, is sufficiently manifest.

The modes of oppression against which security is here endeavoured to be provided, may be more particularly enumerated as follows:†

1. *Vexation on the account of religion:* or say, *Religious persecution.*

N.B. In this particular case, what may happen, is—that the sovereign, if from oppression on this account, he does not derive any particular gratification, may be content to deprive his successors of it: while by his own act he stands deprived of the power, only because he has no desire to make use of it, they will by the same act stand deprived of it, even though they should have the desire to make use of it. In this case, therefore, a direct promise of non-exercise, or even a direct appropriate abdication may not without hope be sued for at his hands.

2. *Secret confinement*, viz. of the person of an individual: confinement, namely within the walls of a prison, or within any other less narrow place.

3. *Secret banishment:* i. e. by forcible exportation, or in any other way exclusion of an individual, from the whole of the dominion of the state in question, or from this or that part of it.

4. *Secret homicide.*‡

5. *Mysterious disappearance:* namely, disappearance of an individual from a cause as yet unknown: it must be any of the above three—confinement, banishment, or death.

6. *Official depredation.*§

7. *Extortion of personal service.*‖

8. *Obstruction of intellectual communication.*¶

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* Note, that in so far as all future evil is out of the question, the loss to sufferers being supposed the same, the evil produced by depredation is less than that produced by barren vexation, by destruction and otherwise; for in the case of depredation, though the enjoyment produced is less than the suffering, still to set against the suffering, there is the enjoyment.

But, when the future is taken into the account, the future, pregnant with the danger and the alarm—then it is that the evil from depredation may be seen to be greater than that from barren vexation: the inducement that excites men to the productive injury, being so much more extensive and constant, as well as commonly stronger in its operation, than that which excites them to the barren one.

† The analysis which immediately follows, bears, in the original MSS., a date two months apart from the more general analysis given above; and perhaps the author would not himself have promulgated them in juxtaposition, without some explanatory remarks as to the different arrangement adopted in the two cases. It will be remarked that neither of them follows the exact order adopted in giving the securities in detail, but they both go over the same ground.—*Ed.*

‡ Against vexation in these three shapes provision is of course already made in the existing system of law, whatever it may be—and the vexatious act being made punishable, secrecy is of course an accompaniment endeavoured to be given to it. But when hands by which the injury is inflicted are of the number of those which are armed with power, that power extends to the giving to the whole operation a degree of secrecy beyond any which could be given to it by ordinary and powerless hands: and for the maintenance of secrecy, even where power is irresistible, the avoidance of odium affords commonly an adequate inducement. By the arrangements proposed under these heads, secrecy will be found combated by instruments of elucidation of which none are everywhere in use, and of which some are not anywhere as yet in use.

§ If exercised by the sovereign himself, the nature of the case admits not of a remedy. But, if exercised by this or that functionary subordinate to him, a not impossible event is that this or that other functionary equally subordinate to him,—for example, a judicial functionary or set of functionaries, shall hold themselves warranted—on the supposition, that being unjust, the sovereign has no participation in it,—in declaring this supposition, and proceeding upon it accordingly: that is to say, unless and until compelled by irresistable means to know, that the sovereign himself is the person, or of the number of the persons, from whose will the vexation has emanated.

‖ This article is necessary to complete the description of depredations; the subject-matter of wealth is composed either of things or of the services performed by persons.

¶ To this head belong all measures of suppression or restraint, applied to public discussion, or to the use of the pen or the press, on the subject of political measures and men, or to communication on

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9. *National debilitation.**
10. *Violation of private documents.*†

CHAPTER II.

PUBLIC OPINION THE SOLE REMEDY—PARALLEL BETWEEN THE PUBLIC-OPINION TRIBUNAL AND THE OFFICIAL JUDICATORIES.

SECTION I.

General view of the Public-Opinion Tribunal.

Thus much as to the disease; now as to the remedy: of the two only accessible remedies that the nature of the case admits of, the only one that belongs to the present purpose. For conveying a general idea of the remedy, a single word—*publicity*—may for the moment serve: but before the nature and operation of it can be conceived with any tolerable degree of distinctness and clearness, considerable explanations will unavoidably be necessary.

Publicity! but to what acts applied? Answer. In the first place to the acts of rulers: in the next place to the opinions formed in relation to them by subjects: publicity to the acts,—knowledge of the acts being necessary to the existence of the opinions.

The existence of such publicity being supposed, and the degree of it perfect, in what way does it contribute to the object in question,—namely the affording security against misrule? Answer. Be the acts of the Government ever so arbitrary, the subject many, in proportion as they form and make public their respective opinions, in relation to them, act in so far, in the character of judges: judges sitting in judgment over the conduct of, and in this way exercising rule over, the rulers themselves.

Exercising in any way rule over their rulers: how then is it that they can remain subjects? Answer. In the way of direct mandate and coercive powers;—no: in no such way can they give direction to the conduct of these same rulers. Yes: in the way of indirect and gentle power, or in one word, influence: for in this way do our children, at an age in which nature places them under the absolute dominion of their parents, operate on the conduct of those same parents. But the particular way in which the effect is brought about, may call for further explanation.

Operating thus as judges, the members of this same community may, in their aggregate capacity, be considered as constituting a sort of judicatory or tribunal: call it for example *The Public-Opinion Tribunal.*

Taken in its utmost latitude, this tribunal would include all of them without exception. But, of no question, on any occasion, can any such multitude, in such their capacity, by physical possibility, actually take cognizance. Those less than a certain age, and the infirm, for example, not to mention any other classes, cannot but be excepted. Only to a certain part of the whole number, and that perhaps generally speaking the smallest, will the physical faculty of taking cognizance of any such political question be confined. If then, all the members of the community without exception were to be considered as members of this same half and half imaginary tribunal, those who are not physically incapable of taking part in its deliberations, must be considered as constituting a committee of that same aggregate and multitudinous body—a committee invested

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those subjects in the way of epistolary correspondence or personal intercourse by persons in any numbers.

* To this head belong all measures of suppression or restraint applied to the practice of openly carrying arms offensive and defensive: or that of being trained in the use of them in conjunction with other men in any numbers.

Say *openly:* for of arms secretly worn, the only purpose is individual assassination. It is not by daggers that the defensive force of a people against misrule can be augmented. For defence against malefactors no use can there be in any such concealment. As to the case of a whole people, kept in an oppressed state by an irresistible military force foreign or domestic, it is here noticed, but this is not a place for the consideration of it.

† To this head belongs what is sometimes designated by the inadequate expression of *seizure of papers.* This mode of oppression has for its subject such letters, memorandums, and other visible and tangible instruments of discourse, by the communication of which, to persons other than those for whose eyes they were intended, vexation in almost any shape and to any amount, in any one of an infinitely diversifiable variety of ways, is liable to be produced. So far as the only effect as well as object of the invasion is the furnishing evidence of a misdeed committed or meditated, the vexation, whatsoever might be the shape or the amount of it, could not with propriety be spoken of, by the appellation of *oppression:* nor yet where, as between individual and individual, of the portion of visibly expressed discourse thus dealt with, no other use is made, other than the causing it to be subjected to inspection for a judicial purpose, in the character or for the discovery of evidence: of evidence tending to give validity or invalidity to this or that claim of right.

But by vexation, committed in this shape by public functionaries without control, oppression to an indefinite amount is capable of being produced. On the occasion or on pretence of a search for evidence of a misdeed in this or that shape committed or not committed, writings of all sorts and in any numbers might be destroyed, damaged, carried off, or inspected: inspected and the contents divulgated. Commercial credit might be ruined, enmities excited, peace and reputation of families destroyed, and so forth. On pretence of search for evidence, alleged to be in the possession of the person in question, papers or other objects not found in his possession might by the authors of a pretended search be inserted among such as were found in it: the friendly deceit practised by Joseph upon his brethren might in this way be practised for a hostile and homicidal purpose.

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with the powers of the whole: a committee in which, as in a sort of committee every now and then exemplified in the proceedings of the English House of Commons, as many of the members of the house as enter have voices.

Again, take this or that particular operation. Of those who, all of them, possess the physical capacity of entering on it, a certain portion only, and that most commonly the smallest portion, will actually take cognizance of it: if then, those who might take such cognizance are considered as constituting a committee of that same body, then those who thus actually do take part in the business may be considered as constituting a sub-committee.

The greater the suffering produced by any act of oppression, the greater, provided it has been made known to them, is the number of the individuals who, in the character of members of this committee, are likely to take cognizance of the affair in the first instance. The greater the number of these members of this committee, who having joined in the cognizance thus taken, pass condemnation on the deed, the greater the number of those other persons who on the authority of this report take cognizance, not of the affair at large, but of the conduct of the actors, whoever they may be, in the act of oppression, so far as to concur in the opinion—the judgment, the sentence of condemnation,—passed upon those oppressive agents in consideration of their oppressive act.

The greater the number of those who concur and join in the provisional sentence, the greater the number of those who are likely to concur and join in the definitive sentence. As to the sentence, whatsoever may be the individual gradation of punishment, the ultimate punishment which it is in the power of this tribunal to inflict on the oppressors, whosoever they may be, consists in the withdrawing from them altogether that obedience to the extent of which that of their power is correspondent and commensurate. The subtraction of obedience, suppose it universal,—the corresponding power is by the very supposition at an end. This same subtraction is according to the description thus given of it, a mere negative act. But in the production of the effect arrived at by it, positive acts directed to the same end have place or come to be exercised. The extinction of the life of the oppressor-in-chief, for example, may be the punishment indicated by the sentence; executioners, any number of the members appointed for the purpose, or even this or that single one of them. By the adherents of the oppressor, the corresponding sentence with the execution of it, will, of course, be objected to on the ground of irregularity. But to act against this word irregularity, some other will be found by the concurrers in and approvers of the sentence.

In England, for example, if the king were among the individuals upon whom the supposed sentence had been passed, and execution given to it accordingly, a natural and constitutional objection would be, that to render it regular and constitutional, an act, called an act of attainder, was necessary,—an act of attainder passed like every other act of parliament by the joint consent and concurrence of the King's Most Excellent Majesty, as well as that of the Lords and Commons of Great Britain and Ireland, almost all of them in one way or other in a state of dependence on his good pleasure; and that, His Majesty not having been pleased to give his consent to any such act, the sentences so passed and executed are thereby null and void. By any regular Tribunal composed of Judges placed by his said Most Excellent Majesty, this objection would be held valid: and on the individual by whom the sentence in question had so been executed on the body of his said Majesty, a sentence, including amongst other things the extinction of the life of this irregularly commissioned executioner, would accordingly be executed. On the other hand, by the member or members of the irregularly constituted Tribunal of Public Opinion, under whose authority the sentence of extinction against the Monarch had so been executed, the objection would as surely be overruled. On the part of this, or any other malefactor, it would have been perfectly regular for him to have given his assent to the sentence passed upon himself. But though perfectly regular, it is by no means usual. It is so far from being so, that if any such assent were waited for, it may be stated as a matter of certainty that neither to the purpose of extinction of life, nor to the purpose of any the slightest restriction, would any bar be opposed in any case to the utmost quantity of suffering which it would be, physically speaking, in the power of the supreme ruler to inflict on the individuals subject to his power, in the legal sense of that same imposing appellation.

In the above strain, for example, thought and acted the Members of that section of the Public-Opinion Tribunal, by whose warrant, by the denomination of a warrant by the Members of the High Court of Justice, the life of Charles the First of England was extinguished at Westminster in the year 1649.

Of this sort, among the punishments which it belongs to the power of the Tribunal of Public Opinion to inflict, is that which stands highest in the scale. But beneath it stand others in number and variety indefinite. Among them are—1. All obstructions to the exaction of contributions, the produce of which is placed at the disposal of the Sovereign: 2. All obstructions capable of being opposed to the execution of the judgments of the several regularly constituted Tribunals: 3. All modes of annoyance, by which, in retribution for the demonstrations of hatred and contempt received, demonstrations of correspondent hatred and contempt are rendered: 4. Invectives said and sung: 5. Invectives written and pasted up: 6. Of whatever liberty is left to the subjects,

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to the members of the community at large, by the laws and practices of the government,—use made to the purpose of opposing, and, so far as may be, frustrating these same laws and that same practice. All this while, be the quantity of suffering ever so enormous, so long as regularity, and nothing else is looked to,—all this while to the Acts of Government, by which all this misery is produced, on the score of regularity at least, nothing can be excepted. Of whatsoever is done by the superior authority of the State, or by any subordinate authority by its order, or with its allowance, in how great a degree soever productive of human suffering, and destructive of human happiness, regularity is an inseparable quality and accompaniment: irregularity of whatsoever is done by the Tribunal of Public Opinion, in opposition to anything which is done by the constituted authorities. Irregular it is in whatsoever degree it has the effect of diminishing the quantity of suffering produced by the regular Tribunals, and is in this, or any other way, productive of addition to the net amount of human happiness. In so far, then, as, by the ruling Members of this irregular Tribunal, their own interest is rightly understood, the option is throughout between regularity and happiness. By those by whom regularity is preferred to happiness, this same irregular Tribunal will be hated, even in so far as fear permits—despised, and everything done that can be done to diminish, and, if possible, annihilate its power.

Those who desire to see any check whatsoever to the power of the government under which they live, or any limit to their sufferings under it, must look for such check and limit to the source of the Public-Opinion Tribunal, irregular though it be, and, to the degree in which it has been seen, fictitious: to this place of refuge, or to none; for no other has the nature of things afforded. To this Tribunal they must, on every occasion, make appeal. To this Tribunal they must, on every occasion, give what contribution it is in their power to give: for do what they can, never can they give to it too much praise: never can they ever give to it enough: never can they give to it so much as, for the greatest happiness of the greatest number, it would be desirable that it should have.

In the assertion implied in the giving, as above, to a certain portion of the members of the community, the several denominations—Public-Opinion Tribunal—Committee of the Public-Opinion Tribunal—and Sub-committee of the Public-Opinion Tribunal—there is a mixture of the real and the fictitious. In this statement, what, it may be asked, then, are the points that are real, what those which are fictitious? Why with that which is real mix up anything fictitious? Of these two questions, the latter may with more convenience be answered first; say, then, from the necessity of the case: for of that which is real, it is not possible to give any clear explanation, but by the help of something which is fictitious. The imperfection is one that is inherent in the very nature of language. Too often is the language of fiction employed for no other purpose than deceit: but this case is not of the number. Not so much for avoidance of imputation, as for clearness of explanation, an endeavour will now be made to draw the line of separation throughout: to point out, in these appellatives, what there is that agrees with abstract truth,—what there is that is metaphysical and fictitious.

For this purpose, the plainest course that can be taken is to confront the scattered body thus newly placed upon the list of judicatories, with those to which the title will not, by any one, be refused: to bring them to view in conjunction, giving indication, all along, of their several points of agreement and difference under so many determinate heads: placing, of course, in front the ordinary sort of judicatory, and making it the standard of reference.

Section II.

Attributes of a Judicatory.

The more closely the nature of the Public-Opinion Tribunal is looked into, the more clear and strong will be the conception of its efficiency, and consequently its existence.

When announced, it will be apt to present itself as nothing more than the offspring of imagination and language. The cause and reason of this is, that on no occasion are the several members of it seen sitting altogether; nor in their official and judicial capacity are they so much as capable of sitting and taking part in the business at the same time, or in the same edifice or enclosure; or, when at a distance, of maintaining anything like a regular course of correspondence. It wears, therefore, the colour of fictitiousness, but it possesses the substance of reality. This will be rendered manifest in proportion as observation is taken of the operations, by the performance of which the ordinary judicatories, commonly so called,—those in the instance of which no one could think of contesting the denomination,—are characterized.

To a judicatory, as such, belong certain functions; these functions are exercised by the performance of correspondent operations. To a judicatory, as such, belongs a certain mass of power: namely, the power necessary to the performance of these same operations. To the will of the several members of every judicatory applies, moreover, a certain mass of ruling interest: and in the exercise of their power they will, of course, be guided by the direction in which their will is acted on by this same ruling interest.

To the head of ruling interest belongs that of pay, since the ruling interest by which they are respectively actuated, depends in a great degree on their pay, if pay they have: on the manner in which it is connected with their continuance in their situations, and the line of conduct therein maintained by them.

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As to the operations or functions, they may be thus enumerated.

1. Receiving claims and accusations: claims referring to what is called the civil branch, *i. e.* the non-penal branch of judicature—accusations to the penal.

2. Receiving oppositions and defences,—oppositions to claims, defences against accusations.

3. Receiving, compiling, collecting, and storing, evidence, viz. in support of oppositions as well as claims, of defences as well as accusations.

4. Hearing or reading arguments, or say reasons, of parties, or advocates, or both.

5. Forming on each occasion an opinion, or say a judgment, with a correspondent will.

6. Giving expression to such judgment and will.

7. Giving execution and effect to such judgment and will.

Among different judicatories, it is evident, may these functions in various ways be distributed. But, to the attainment of the ends of justice, it is necessary that in some way or other they should be all performed.

Attached to these essential operations may be other incidental ones, such as entertaining applications for delay, and so forth; but to the catalogue of essential ones it will be found that the above belong, and that there are no others that do belong to it.

As to the word power, before it can serve to bring to view, in any distinct form, the attributes comprehended under it, certain particulars, serving as sources of division, will require to be brought to view: namely, 1, The several fields over which it exercises itself: 2, The means of efficiency—means by the use of which it gives to itself execution and effect.

1. As to fields of exercise. To the power of every efficient official judicatory, belong two distinguishable fields; 1, the local, which may also be termed the territorial, topographical, or geographical field: 2, the logical, termed also the metaphysical. In the logical may, moreover, be distinguished, 1, the corporeal subjects included in it, namely, the persons and things: 2, the incorporeal subjects, namely, the suits or demands of which cognizance is taken, *i. e.* the claims and accusations.

2. As to means of efficiency, they are the means of operating with effect on the above-mentioned subjects: namely,—on immoveable portions of territory, moveable things, and persons: on things by means operating on body alone, namely, physical force; on persons by these same means, with the addition of forces operating on mind, namely, prospect of punishment, (*i. e.* of eventual evil in any shape,) and prospect of reward. On the aggregate amplitude of these several fields and means of efficiency depends the aggregate amplitude, or say the magnitude, of the mass of power belonging to any official judicatory; in the same elements will be found the measure of the power of this unofficial judicatory—the Public-Opinion Tribunal.

As to *ruling interest*, it is a topic that will be apt to present itself as more new than agreeable when applied to an official judicatory; it does not, however, the less indisputably belong to it, as well as to this all-comprehensive, though unofficial judicatory, the Public-Opinion Tribunal; and in this one of its attributes will this all-comprehensive though unofficial judicatory be seen to possess its strongest title to regard. The interest of the Public-Opinion Tribunal—that is to say, of the aggregate number of its members—the ruling interest, can never be in discordance with the interest of the aggregate number of the members of the particular state or community in question: whereas, the interest,—whether we take the aggregate interest of the whole number of official tribunals, or their several particular and distinct interests; that is to say, the aggregate of the interests of the several members,—can never be in complete accordance with that same universal interest.

Such is the identity on the part of the real net interest: and in so far as correctly understood, and capable of being pursued, it is the net interest that, in every individual and in every aggregate of individuals, will, on each occasion, be the actual ruling interest.

As to the attribute of power, the existence of it will be more readily recognised in the gross, namely, by the contemplation of its effects, than comprehended in detail, by reference made to the corresponding elements in the power of a judicatory of the official kind. But to its being clearly apprehended and conceived, a glance at these details is indispensable. In the first instance, however, thus much may be remarked of it in the gross, namely, that by its effects the reality of the power itself is demonstrated, and by the reality of the power, the reality of the judicatory to which the power is ascribed and attributed; for of that which has no existence there can be no attributes.

Section III.

Constitution of this unofficial Judicatory.

To every official judicatory, the above several attributes will be allowed to belong without dispute. No less truly will they be seen to belong to the unofficial judicatory.

First as to the members. In this first point will be seen to lie the greatest, or rather the only difficulty. In this part of the picture, reality wears somewhat the air of fiction. Of the object designated by the appellation of Public-Opinion Tribunal, familiar as the expression is, the existence will be apt to be suspected of being no other than figurative, and merely nominal: on the other hand the name of it is not more perfectly familiar, than the existence of its power is universally recognised; and of an object, the power of which is

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admitted, to deny the existence, would be self-contradiction. Even in regard to members, the only difficulty lies in the determination of the individuals to whom, on each occasion, the appellation can without impropriety be ascribed; and even on this point, the uncertainty may not unfrequently be seen shared in by the official judicatories.

Be this as it may, a function supposes a functionary—one functionary at the least; an operation an operator. Ere any account can be rendered of the operation of the unofficial judicatory, some individual or individuals must be brought to view, as and for so many members of this judicatory—members by whom the several operations are performed. At the head of these, as exercising the function in question in a manner the most conspicuous, sits the editor of a newspaper, in which the press, however legally handcuffed otherwise, is to the purpose of being capable of affording an example of this sort of judicature, practically free. Say, for example, an English newspaper. An Anglo-American United States newspaper is to this purpose legally as well as practically free; but it being in Europe less known, the English newspaper will be the more convenient standard of reference.

But of the unofficial judicatory, an English newspaper editor is but one member amongst millions. To show in what way he is the head, it will be necessary to show in what relation this one individual stands to the millions: in a word, of what different classes in relation to so many different purposes, this judicatory, taken in its totality, is composed; to show, in short, the composition of the whole judicatory.

Take any political community—the British Empire for example: of the aggregate of all the persons belonging to it, ruler and subjects taken together, will the Public-Opinion Tribunal be composed; and not only the inhabitants of the two islands, but the inhabitants of the several distant dependencies in the once four quarters—now five great portions—of the globe, must to this, as to other purposes, be considered as included. But not to speak of those who do not take a part in the consideration of subject-matters of the sort in question, a large proportion of the number—to wit children below a certain age, is composed of those who by physical incapacity are rendered physically incapable of taking such part. Distinction 1. Those members who belong to the Tribunal in respect of interest and future practice only, and those who belong to it in respect of personal practice.* Among those who belong to it, in respect of personal practice, may again be distinguished these classes—viz. 1. The merely speaking members; 2. Those who are not only speaking but also reading members; 3. Those who are not only speaking and reading, but also writing members; 4. Those who are not only speaking, reading, and writing, but also printing and publishing members.

The class of merely speaking members forms the basis of the several others: it cannot anywhere at any time be extinguished: if it could be extinguished, European governments are not wanting in which it would most assuredly be extinguished—at least endeavoured to be so. For instance, by cutting tongues out, it might be, and would most effectually be, extinguished. But tongues and the use of them are indispensable to the performance of the labour, without which the stock of the several instruments of felicity, by means of which the felicity of the ruling one and of the subruling few is reaped, could not be brought into existence. By any such extinction as this, the interest of these same rulers would, according to their conception of it, be not served but disserved. Accordingly no such extinction has ever yet been endeavoured at, or seems at all likely ever to be endeavoured at. Not so by the general extinction of those other classes, saving and excepting such a portion of them respectively, as under the direction of the supreme ruler may be necessary to be employed in the production and preparation of these same useful and necessary instruments, and securing him in the undisturbed possession of them, and in the application of them by him and for him to their respectively appropriate purposes.

So long as human beings come in presence of each other, it is impossible, generally speaking, to prevent their conversing with each other, and so long as they converse with each other on any subject, it is not possible to prevent them from conversing occasionally upon political subjects. In the interior of a palace, even without the trouble of cutting their tongues out, men may be converted into mutes. Accordingly in palaces, in which the art and science of legitimate rule has been carried to perfection, a transformation of this sort is known to have been accomplished. But in places other than palaces, for preventing conversation from taking any such dangerous direction, no means does the nature of the case afford, but the employment of spies. But here occur divers difficulties. Spies adequate to the purpose would require to be no less numerous than soldiers, and to be even more highly paid. And how well soever paid, among them—no one can say in how large a proportion—might be those who, seeing it necessary to deceive somebody, would prefer deceiving the universal enemy to deceiving their respective friends. Moreover, the more strict and effective the

* Not excluded from this judicatory are persons of the female sex as such. From the exercise of a share in the constitutive power, by means of votes in the election of the possessors of the supreme operative power, they, the greater half of the species, stand as yet excluded by tyranny and prejudice. But from a share in the power of the judicatory of judicatories, not even the united force of tyranny and prejudice, ever have altogether excluded them anywhere, much less will henceforward ever exclude them.

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system of discipline employed in the extinction of the several classes of publishers, writers, and readers, the more apt would this policy be to become the subject of frequent, not to say constant conversation, among the classes of speakers, whose existence it would never be possible to extinguish.

If all the members of the political community in question be considered as being every one of them so many members of the Public-Opinion Tribunal, those who are, physically speaking, not incapable of acting as such, may be considered as constituting a standing committee of the whole body invested with the powers of the whole. What would, however, be more simple in conception, and would be more exactly conformable to direct truth, would be to consider the whole aggregate of those who are, physically speaking, not incapable of taking a part in the consideration of public affairs, as composing and constituting the entire judicatory: invested with the power in trust for themselves and the several other members of the community at large.

These, then, constituting the entire body, a committee of that same body will be the aggregate, composed of all those who, at any given point of time, do actually concur in taking cognizance of the affairs in question, or any part of them; and that, whether in the way of publication, writing, reading, or oral converse: and, of the general committee, so many sub-committees may be conceived as constituted—so many sub-committees as there are aggregates of individuals who, on any occasion, in any place, take actual cognizance of this or that political operation, to whatever part of the field of government it appertains.

Of these several subcommittees, the several individuals by whom, respectively, a literary work of any kind, bearing in any way upon any part of the field of government, is published, may be considered as so many presiding, or say leading members, or, in one word, presidents. But, among these presidents, a political newspaper editor, being the only one in constant authority, is, as it were, president of all these presidents; king of these kings; lord of these lords of the dominion of liberty and independence; real and not sham representatives of all who buy, and of all who read with sympathy, their respective publications, the product of their respective labours.

Among the infinity of subcommittees of the Public-Opinion Tribunal, as above indicated, three, as being the most efficient ones, require to be distinguished: these are—

1 The Subcommittee of General Superintendance. President, a newspaper editor. Other members, his customers and readers, and in particular his correspondents. These last belong to the catalogue of leading members.

2. Subcommittees of Justice, or say Judicature. Members, the several individuals who, being present in the several judicatories during the carrying on of the several businesses, take interest in what is going forward, in such sort as to form an opinion of approbation or disapprobation, in relation to any part of it.

3. Subcommittees of Religion. Members, the persons present at the several sermons or other discourses held on the subject of religion by the several officiating priests: also those by whom the several works on that subject are read or heard in places other than those which are appropriated to this sort of occupation.

In one and the same number of an English newspaper may commonly be seen the united product of the labours of a number of these subcommittees.

Thus much may, it is hoped, suffice for the purpose of illustration, and for the giving to our conception of the subject such degree of clearness, as the nature of the case admits.

Section IV.

Functions or Operations of the Supreme Unofficial, compared with those of the Official Judicatories.

The several operations included in this part of the business of an English newspaper, being thus taken, as and for a specimen and sample of the functions of a sub-committee of the Public-Opinion Tribunal, let us see in what way the mode in which these several functions, as thus performed by it, agrees with, and in what way it differs from, the mode in which these same functions are most commonly performed, in and by an official judicatory.

To the present purpose they may be enumerated as follows:—

1. Receiving claims and accusations.
2. Receiving oppositions and defences.
3. Receiving, compelling, collecting, and storing, evidence.
4. Receiving, and hearing or reading, arguments of parties litigant, or advocates.
5. Forming opinions or judgments on these, with correspondent *will*.
6. Giving expression to such judgments and will.
7. Giving impression to such expression.
8. Giving diffusion to such impression.
9. Giving execution and effect to such judgments and will.

Distinct in themselves are all these several operations, and, by the ordinary Judicatories, who have the time of other men as well as their own at their disposal, as well as the channels of communication at command, they are performed at different times, and in regular succession, as above displayed.

In and by the Public-Opinion Tribunal, a member of it not having, generally speaking, any channel of communication, or the time of any other person at his command, these several operations cannot respectively be performed but as occasion offers; and when occasion does offer, it must be made the most of, and the several operations, all of them, or as many as can with advantage, be performed at once.

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Follow, under the above several heads, a few observations, having for their object the bringing to view the principal points of agreement and difference between the one sort of Judicature and the other.

1. Receiving accusations.*

In the newspaper in question, an allegation is made of misconduct in a certain shape, as having had place on the part of a certain functionary or set of functionaries: the accuser, whether the editor himself or a correspondent, makes to newspapers no difference. Here the function of receiving accusations stands exemplified.

2. Receiving Defences. Of the exemplification made of the exercise of this function, indication will be made presently.

3. On this same occasion, a correspondent perhaps makes mention of this or that particular, as having fallen within his own knowledge: the name though not signed,—having for the security of editor and printer, or not having, been privately communicated. Here the function of reception of evidence, and at the same time that of the impression of it, and that of the diffusion of it, stand exemplified.

At the same time, whether directly by means of appropriate and direct questions, or at any rate, indirectly and virtually by means of apposite affirmations as above, the party accused is called on either to confess the act thus indicated, with the inculpative circumstances, and at the same time directly or virtually to confess the culpability of it, or to deny the act, or some inculpative circumstance or circumstances belonging to it, or admitting what is above, to argue in justification of the act.

The next day, or next but one, suppose, the party thus called on argues in justification of the act; and at the same time either directly avers the having done it, or by his silence, or the turn given to his argument, virtually admits it: here the function of compelling evidence stands exemplified.

On the former day, intimation was moreover given of certain other persons, as having been percipient witnesses of the act, or this or that inculpative circumstance belonging to it, and as being thereby rendered capable, if so disposed, of becoming in relation thereto reporting, narrating, or say, deposing witnesses. Here a commencement of the function of collecting evidence stands exemplified.

Purchasers, in number more or less considerable, being in the habit of filing and preserving the numbers of the newspaper in question as they come out, here the function of keeping in store—in a word, of storing the stock of evidence in question stands exemplified.

4. With the evidence thus received, compelled, collected, and kept in store, is commonly at the same time mixed up, and thus received and kept in store in some proportion or other, matter on both sides bearing the character of argument: argument having for its object the bringing to view either the probability or improbability of the alleged act, or of the alleged inculpatory circumstances, or the impropriety or propriety of it or both together: each party, by the argument he delivers, directly or virtually calling for counter-argument on the other side. Here then the function of receiving arguments at the hands of parties litigant or their advocates, or both, stands exemplified. The function of reading or hearing these arguments—this mass of argument, together with the correspondent mass of evidence is, in this case, left to the purchasers and other readers or hearers of the newspaper, each one exercising it for himself, or this or that of his associates.

5 and 6. Having received from his correspondent the above-mentioned letter and thereupon the several other masses of evidence and argument above-mentioned, the editor in the course of the controversy forms and declares some opinion, or say judgment, of his own, provisional or definitive, in favour of the accusing or the defending side. Here the function of forming, and that of giving expression to, such opinion and judgment, stand exemplified.

The judgment, suppose, is a judgment declaring conviction, and passing sentence of condemnation on the party so accused. But in such judgment and sentence of condemnation, is included an opinion, that by the party thus condemned, a disreputable act has been committed: an act whereby he will be lowered in the estimation of other members of this same unofficial judicatory in an indeterminable and incalculable number, in consequence of which depression, he will in the natural course of things, be deprived in some sort and purpose or other of their good offices, and upon occasion even be exposed, in some sort or purpose, to positive ill offices at their hands: and in such judgment is naturally at least, if not necessarily and virtually included, the declaration of a will, or say, a desire that such shall be the result.

By this president and leading member of this subcommittee of the Public-Opinion Tribunal, by which cognizance is taken of this affair—by him, not to speak of others who agree with him—expression is given to the judgment so formed. But by others in uncalculable number, by whom no judgment is expressed,—a judgment on the subject—the like judgment suppose—is formed. But, in such instances the judgment being formed, though no expression is ever given to it, a correspondent will as above is naturally formed,—a correspondent will—whence result subtraction of good offices and performance of ill offices, as above.

7 and 8. From the newspaper editor the aggregate of this mixed mass of evidence and argument, together with the accompanying preliminary matter as above, and the expres-

* In the case of *a claim*, conception not being quite so simple, it may for the purpose of the present exemplification be put aside.

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sion given to the judgment and will as above, receive of course impression and diffusion in the way of his business. Here then the several functions of giving impression and diffusion to the judgment and will, and to the expression given to them, stand exemplified.

9. In ways and by members of this same unofficial judicatory, in a number altogether out of the reach, not only of general perceptive enumeration, but of calculation, execution and effect will continually, and as it were of course, be given to the judgment in question, namely, by the consequent will and ill offices, positive and negative, as above. Here, then, the function of giving effect and execution to the opinion, or say the judgment in question, stands exemplified.

From a review of the above several functions or operations, may be formed a deduction of no small practical moment. This is, the prodigious importance, absolute and comparative, of the situation and functions of this president and leading member of so many subcommittees of this not the less supreme and all-comprehensive because unofficial judicatory: the importance absolute, and more particularly in a comparative point of view: comparison had with all other members of all other and whatsoever classes, as above-mentioned.

Next to him in the order of importance comes the author of this or that work belonging to some department of the field of politics—of that vast field, the whole of which lies within the dominion and is every day coming under the survey, of the unofficial functionary.

Section V.

Power of the Unofficial compared with that of the Official Judicatory.

I. Means of execution and effect. Among the elements constitutive of political power, this, though in the list of them it occupies the last place, is the first to be looked to, this being the effectual one, without a clear conception of which no clear conception of the others can be formed.

Of the means of execution and effect, the aggregate efficiency will depend, 1. upon the number of persons disposed to concur in contributing to the effect; 2. partly upon the internal force, physical and mental, of each; 3. partly upon the quantity of external physical force at the command of each, *i. e.* of the sorts of things capable of giving increase to human physical force, such as arms, ammunition, &c.; 4. partly upon the facility of acting in concert; 5. partly upon the smallness of all opposing force; 6. partly upon the magnitude of the evil, to which the possessor of the power has the physical faculty of subjecting the individuals subject to it in case of non-compliance and obedience; 7. partly upon the comparative magnitude of such evil, viz. as compared with the magnitude of the evil to which, in the case of a rival possessor of power, such rival is able to subject the common subject or subordinate.

Compare now, under these several heads, the condition of the unofficial judicatory with that of the official ones considered separately or in the aggregate.

1. In respect of the number of persons disposed, in the character of agents, to concur in giving execution and effect to the opinions, judgments, and wills in question. In this particular the advantage which the unofficial judicatory possesses, when compared with the official judicatories, all of them put together, is at first mention manifest. Of those by whom on any occasion the judgment and will of the former have been formed, and those whom it finds disposed to concur in giving sanction and effect to them, some with more energy, others with less, the number is exactly the same; it is the aggregate number of the whole community.

2. The same may be said of the aggregate amount of internal force, physical and mental.

3. The same may be said of that portion of the aggregate means of execution which is composed of objects belonging to the class of things: for to the aggregate of the individuals above-mentioned, as belonging on this occasion to the class of persons, belongs the aggregate of the individual objects belonging to the class of things.

6.* So likewise as to the *magnitude of the evil* to which in quality of possessors of the power, that is to say, of the above-mentioned elementary ingredients of it, the members of the judicatory in question have the physical faculty of subjecting those at whose charge the execution and effect in question are to be given in case of non-compliance or disobedience. For in this magnitude is comprehended, without any exception or limitation, the aggregate amount of all the evil to which, in what shape soever, it is in the power of man to subject man.

7. So likewise in the case of competition, as to the magnitude of the evil to which the members of this unofficial judicatory, and the members of the several official judicatories, its rivals, are capable separately and collectively to produce at the charge of any individual or individuals considered in the character of their common subjects.

II. Personal branch of the corporeal field of the power of a judicatory.

Under the head which applies to members, has been brought to view the all-comprehensiveness of this branch of the unofficial judicatory, as compared with any official judicatory or judicatories; not only sharers of this power, but contributors to its magnitude, because so many ready executors of its will, are the members of this unofficial judicatory every one of them. Under that same head has also

* For No. 4 and 5 see below, as to the points in which the unofficial is inferior to the official judicatory.

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been brought to view the faculty which in each political community this unofficial judicatory has of receiving reinforcements to an unlimited amount from the members of the like judicatories in the several other political communities having place on the surface of the globe.

Compare this element of its power with the correspondent element of the most powerful official judicatory in the same political state. The power of the official judicatory will be still the inferior: no such faculty of receiving reinforcements to an unlimited amount from other states belongs to it.

Correspondent to the extent in respect of the number of the individuals of whose force the force of this aggregate is composed, is the extent of the number of those on whom the force is capable of being exercised. On the one hand, all enter into the composition of the public force: so, on the other hand, all behold all in a state of subjection to this same public force.

III. Incorporeal field of jurisdiction of a judicatory—extent of the classes of suits or causes appertaining to it, *i. e.* of the rights on which claims may be grounded, and the wrongs on which accusations may be grounded.

In the case of the official judicatories, the rights which their field of jurisdiction embraces are those only in which, proceeding according to the system of procedure pursued by them, more good than evil, with reference to the interests they are employed to support, may, it is supposed, be produced by their interference; and so in the case of accusations. By the unofficial judicatory cognizance is taken, not only of all these same rights and wrongs, claims and accusations, but also of all others in which the interests of the community, in respect of the several individuals included in it, are, in the opinion of the several members of the standing committee of the judicatory, and of its several subcommittees, as above, concerned.

Thus much as to the points in which this unofficial judicatory is superior to the official judicatories. Now as to those in which it lies under a disadvantage.

1. In the first place, taken in its totality, it labours under a division—a constant and invariably established division, in respect of interests. Two parties constituting so many sections—the democratical and the aristocratical, are destined, in all communities and at all times, to have place in it. The interests of the few—the extra-opulent, and therefore, if by no other means, the powerful few, being in a state of opposition to that of the many, that of the consuming class which produces nothing to that of the producing class, which produces more than it consumes,—hence it is that, whatever power is in the hands of the aristocratical class, over and above that which is in the hands of the same number of those of the democratical class, constitutes a sort of disease with which the body politic, taken in its totality, is afflicted.

By the original structure of its constitution, this body is destined to labour under two distinguishable diseases, having for their cause or causes the inward resistance of two intestine sets of enemies; one set composed of the ultra-indigent class of malefactors, who, being as such weak and powerless, and objects of general disgust, are thereby exposed to punishment: the other, composed of the ultra-opulent, who being as such powerful and objects of general respect, are thereby exempted and preserved from punishment. Of both of these, depredation is the characteristic occupation: by the ultra-indigent it is ever acted on upon a small scale, by the ultra-opulent upon the largest scale.

Intestine depredators of this class being innate accompaniments of the constitution of every political community, they exist, nor can they ever cease to exist, in a representative democracy, even though constituted in the purest form possible. In that form they may be kept under in such sort as not to be productive of any considerable mischief; but they cannot, consistently with the security of the whole, ever be altogether extirpated. Thus stands the matter in the only sort of government which has for its object the greatest happiness of the greatest number: for as to all others they have for their object the greatest happiness of the smaller number, at the expense of that of the greater.

In a monarchy, at the head of the highest predatory class is stationed the arch-depredator the Monarch: a creature in whose devouring and consuming maw, for the small chance of giving increase to the felicity of that one being, the substances of thousands and tens of thousands of others whose claims are as good as his are consumed.

The analogy between the innate disease of the body politic, and one of the diseases which, in the body natural, though frequent, is but casual, cannot have escaped the observing eye: in the class of malefactors so called and treated as such, may be seen the *ascarides* by which the several parts of the intestinal canal are occupied and infested: in the higher parts—in the aristocrats—may be seen the *teretes*, the smooth and polished sort, as the name imports: in the monarch the solitary worm or grub, in French *ver solitaire*, no constitution being equal to the endurance of more than one, the extraction of which is at once so difficult, so perilous, and yet so necessary. An emblem is not a proof, nor is it here meant as such; but if furnished by the nature of the case, and happily chosen, it will contribute clearness and strength to the conception, and for this purpose alone is it here brought to view.

Happily, the disease, such as it is, is in a particular degree that of infancy: sooner or later the body politic, if not killed by it, outgrows it. Every addition made to the number of readers is an addition to the number of persons capable of reading books on political sub-

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jects, and of so becoming members of sub-committees of the unofficial Judicatory: while by the same means an addition is made to the number of persons by whom discourse is held on that subject in public, or at any rate, in private, and consequently to the number of sub-committee-men, as above. Every addition made to the number of persons becoming inhabitants of towns, in contradistinction to the being inhabitants of the country, separated from one another by distances more or less considerable, becomes an addition to the number of readers of politics, as above, or at least, to the number of hearers of political discussion.

Every addition thus made to the number of the persons habituated or disposed to the constituting themselves members of these unofficial committees, is an addition made to the number of those capable of taking cognizance, and likely to take cognizance of any appeal made to this tribunal by any members of the Government,—by any official functionaries when disagreeing with one another. By every such disagreement an addition is, therefore, naturally made to the power of this Judicatory—of the only body, the interest of which is not in discordance, but in accordance with, as being the same thing with, the interest of the greatest number of the members of the political community in question, whatever it be: even by every verbal discussion held between man and man, among the people at large, on that same subject, an appeal of this sort is made. Accordingly, by every such disagreement, so as the subject-matter and the particulars of it do but transpire, a service is rendered to the public interest—to the greatest happiness of the greatest number. No such service is commonly intended, but how far soever from being intended, it is not the less rendered.

Of such disagreement the causes are happily not a few.

1. In a monarchy a disputed succession is liable to have place.

2. A minority—the nonage of the monarch.

3. The manifest mental debility of the monarch, whether from old age, permanent bodily ill health or mental derangement. Manifest it must be, and undisguiseably so, to constitute anything that can be regarded as a particular, and incidental, and extraordinary case: for as to intellectual inferiority, comparison had with the ordinary herd, it is among the necessary results of the situation itself.

4. Between any two branches of the monarch's family, any disagreement in which the monarch takes, or is thought to take a part.

5. A disagreement between the sovereign in possession and the monarch in expectancy, —between the monarch on the throne and the next heir-apparent or presumptive.

6. Disagreement among the members of an administration, or as between the members of the existing administration, and the other men of rank and opulence, who are habitually collected within the field of the sovereign's observation.

In a mixed monarchy, the existence of disagreement between the constituent parts of it is of the very essence of the species. True it is that another property belonging to the essence of the species is the having a bond of union, a sinister interest in which they share —a sinister interest acting in evident opposition to the interest of the greatest happiness of the greatest number: and by this unity of interest, the government may, for a length of time more or less considerable, be kept from dissolution. Not less true is it, however, that in a government of this species, not less considerable are the causes of disagreement that have place.

If, between the power of the monarch and whatsoever power there is by which his is kept in check, the limits are not sufficiently defined, thereupon come contentions between the one power and the other.

So, if between two powers subordinate to that of the monarch, if so it be that the monarch takes a part on the one side or the other, which is what can scarcely fail to have place.

By a certain degree of prudence, disagreement from any one of the above three causes may be kept from breaking out: one cause, however, there remains, which is of the essence of the species, and which cannot by any human prudence be at any time altogether excluded. This is the competition for power as between party and party in the class of statesmen.

The matter of good in the shape of matter of corruption is, suppose, even the whole of it in the hands of the monarch, or at his disposal. Still, be it ever so vast, and be his desire of satisfying everybody ever so ardent, to give satisfaction to that desire, is at all times plainly impossible. So far from decreasing, as the quantity at his disposal, and accordingly, disposed of, increases, the aggregate amount of the appetite increases in that same ratio: the more there is to be had of it, the greater is the number of those, each of whom beholds for himself a probability of obtaining a share of it.

Thus then, between the party by whom this mass is shared (including those who, by their means, are in certain expectation of succeeding to a share in it) on the one hand, and the party to whom, neither in possession nor in immediate expectancy, is any share in view, strife, constant and interminable, has place,—constantly is the excluded party occupied in forcing itself in. For doing so it has no means but that of preferring against the party in possession, accusations, matter for which never has been, nor in such a form of government ever can by any possibility be wanting. But for the bringing and prosecuting these accusations, there exists but one possible tribunal, and this is—the Public-Opinion Tribunal.

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Difficult, however, is the game which has at all times to be played by the corruptionist in expectancy. Otherwise than by appeal to the power of the unofficial Judicatory, in no way can he do anything towards the forwarding of his wishes. But to carry on any such appeal is to act as accuser, either of the functionaries who act under the form of government, or of the form of government itself, or both. As to the pointing of the accusation against the individuals their rivals, if that were all, in this it is not in the nature of the case that there should be anything that is not perfectly agreeable to them: what is thus aimed at is all profit, no loss. But under such a government the utmost mischief that is ever done beyond that which the government itself affords a warrant for, is in comparison with that which is done with a sufficient warrant from the form of government very inconsiderable. Depredation, and with it oppression in every other imaginable shape, may be carried on to any extent, and yet nothing be done in which condemnation in any shape is passed by either the letter or the spirit of the law, or the usage of government in or under it. Meantime that same load will be at all times pressing, and with ever-increasing weight; and those men being, by their hapless condition, condemned to keep up the continued profession of being friends to the people, no sooner does any particular instance of misrule in either of these shapes come to light, than all eyes are turned to them in expectation of their taking up the accusing part. In truth, the depredation and oppression exercised, having all of it the form of the government for its cause, it is never possible that the connexion between the effect and the cause can escape all eyes.

2. Second point of disadvantage—comparative incapacity of acting in concert.

Of this disadvantage there are two sorts of causes, the one natural, the other factitious.

Of the natural causes, the radical and principal one is *local distance*. It presses, of course, with particular weight on the condition of the inhabitants of the country, as compared and contrasted with that of the inhabitants of towns. In both cases its pressure is in the inverse ratio of the density of the population, and, as between town and town, in the inverse ratio of the number of inhabitants in each.

Of this cause the efficiency is capable of being counteracted and disturbed, by every circumstance by which either facility is given to the means of communication, or a counter-advantage afforded by means of profit in a pecuniary or any other shape, from frequent intercourse. By water carriage, for example, whether it be by sea or inland navigation that the facility is afforded,—by mutual advantage in the way of trade, the counter-advantage is afforded.

Of this same disadvantage the factitious causes are those which are produced by prohibitions and restrictions imposed by governments.

In every government but a democracy, the interest of the ruling few being in a state of opposition to the general interest, the consequence is, that in every species of government but that one, the class of functionaries beholds in the Public-Opinion Tribunal not a support, but an adverse power: a power capable of becoming superior to its own, capable not only of opposing limits to it, but of extinguishing it, and commonly the only one that is so: the only one without exception in the supposition that the political state in question has nothing of the sort to fear from any foreign State or States.

Hence, consequently, with the governing body of every State but that one, it is a constant object to throw in the way of such communication, so far as applied to political purposes, *i. e.* so far as applied to the formation of subcommittees of the unofficial Judicatory in question, every difficulty possible.

In the course of these endeavours it finds two natural interferences and difficulties: the odium attendant on it, and the obstacles thrown in the way of communication for such transactions as are regarded as being serviceable to its interests, and as such approved of.

As to the odium, it will be in intensity and extent exactly in the ratio of the degree in which the qualities of probity and intelligence have place in the community. By no government which is not an enemy, an uncontrollable enemy, to the rest of the community, can any such endeavour be ever employed: by every such endeavour an avowal is made of such enmity, consequently of such inaptitude, and of its being the interest of all men subject to it to put it down with all possible speed, and by whatsoever means appear to be at the same time the most efficacious, and in the shape of evil in all shapes least expensive: an avowal not in words, it is true, but in deeds; in deeds by which of the state of the agent's mind on every occasion evidence is afforded to such a degree conclusive, that the most probative that in the nature of the case can be afforded by words alone, shrinks into insignificance; and, in truth, sinks into nothing at all when opposed to the above-mentioned practical evidence.

The other impediment consists in the difficulty of preventing or obstructing communication for this unacceptable purpose, without preventing or obstructing it in its application to others that are regarded by the government as serviceable to its interests, or even necessary to its existence.

Take, for instance, the English Government, with its Tax upon Newspapers, An. 1801, £200,000; do. An. 1821, £400,000.* In any coolly reflecting mind, no doubt can have place that were it not for this counter-consideration, every newspaper, the editor of which acts in

* The sum realized by the stamp-duty on newspapers, for the financial year 1840, was £238,394, the duty having been reduced in 1836, from 4d. (with a discount of 25 per cent.) to 1d.—*Ed.*

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the character of leading member of a subcommittee of that Public-Opinion Tribunal, would long ago have been extinguished. The odium—had that been all—the government would have been content to subject itself to; but the odium with the loss of so large a sum added to it, and at a period of so much financial pressure and difficulty, would have been decidedly more than could be afforded to be paid even for so mighty and decisive an advantage.

CHAPTER III.

NOTIFICATION AND PUBLICATION IN REFERENCE TO SECURITIES.

SECTION I.

Subjects of notification, and thence publicity.

1. Ordinances. 2. Transgressions, or any violations of those same ordinances. 3. Suffrages, or opinions formed by the several members of the Public-Opinion Tribunal, on the subject of or in relation to some transgression, as compared with those same ordinances.

Transgression supposes something transgressed; in the instance here in question that something is something having or designed to have the authority of law.

1. In the first place come the several *ordinances*, of which misrule in each of the several shapes against which a security is by this system endeavoured to be provided will have been a transgression: ordinances, or supposed rules having the effect of ordinances—of ordinances interdictive of vexation and oppression in all its several shapes. If at the time of giving establishment to security in those several shapes, ordinances adapted to the purpose are already in existence, it is well; if not, fresh ordinances for the purpose must in this case be provided.

2. In the next place come whatsoever instances of transgression happen to take place. If none, so much the better; the ordinances have in the completest manner possible fulfilled their purpose. If any transgressions within the law in question have had place, the number of them being given, the greater the number to which notification and publicity have been secured as compared with the total number that have had place, the better.

3. *Suffrages.* Understand by suffrages, the opinions produced in the minds of the several members of this same tribunal by the cognizance of the several transgressions. As applied to persons taking cognizance of the several transgressions, the degree of publicity will be as the number of their suffrages.

Note, that in the number of the members of this same tribunal, is included the number of all those on whose obedience or will depends the effect, of the several general salutary tutelary ordinances by which vexation is prohibited, as also of any particular acts or particular ordinances, in consequence of which any acts of vexation and oppression are exercised in violation and transgression of these same general and salutary ordinances. Power on the one part is constituted by and is in greater or less proportion to obedience on the other. It is in the direct ratio of the obedience, and in the inverse ratio of resistance. But the greater the number of the members of the whole community to whom the existence of an act of oppression has been made known, the greater is the number of those by whom, on the occasion of an endeavour to exercise other acts of a similar nature, supposing the first act notified to them, not only may obedience be withholden but resistance opposed.

Rule: abstraction made of the several degrees of influence possessed—influence of understanding on understanding, and influence of will on will included, the actual power of the Public-Opinion Tribunal will be as the number of the suffrages, actually declared in the minds of the several members: its power, as supposed by other persons, and, in particular, the several functionaries to whose transgressions it is the object of the securities to oppose a check, will be as the number of the suffrages which they expect to find formed and delivered.

This influence with its several possible degrees it may be said may be laid out of the account altogether. For of the persons on whom by possibility it is capable of being exercised, the only persons here in question are the members of the political community in question, considered in the character of members of the Public-Opinion Tribunal belonging to it. Thus, accordingly when considered in a general point of view for the most part does the matter stand. One point however there remains in relation to which the sort of influence in question is capable of having a distinct operation. The suffrages, suppose, of all the members of this tribunal take the same direction, they being all of them pronounced in condemnation of the oppressive act in question. Therefore, as between suffrage and suffrage, it makes no difference which of them was the result of a self-formed opinion—which of them the result of an opinion derived from the influence exercised on the mind in question by that of some other member: exercised whether on will, or on understanding, or on both together. But, though, by the supposition, the direction taken by the suffrages is the same, and the ultimate number of them, by what cause soever produced is the number in question, yet the degree of energy with which upon occasion they may respectively be disposed to act in conformity to these same suffrages may be to any amount different: and in each case this degree of energy may be greater or less according to the nature and force of the influence received.

Note, that to simplify the conception, the direction taken by the suffrages in question is, on this occasion, supposed to be the same in the

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instance of every one of them. But as by this supposition the subject of these suffrages is in every instance some act of oppression exercised by the sovereign or individuals, there is nothing in this supposition that seems to be in any very considerable degree wide of the truth.

So much for the several subject-matters to which the act of notification may have need to apply itself. Now, as to the several successive operations, the performance of which may be necessary to the production of the effect—of the effect, by whatsoever name designated, whether notification or publicity.

These preparatory operations will be in a considerable degree different, according to the nature of the subject-matter, according as it comes under one or other of the three above-named denominations, namely, ordinances, transgressions, or suffrages.

Section II.

Notification, with respect to ordinances.

First, let them be supposed already in existence, and possessed of binding force.

If, so far as regards the purpose here in question, they are already present to every mind capable of taking cognizance of the matter, it is well. Unfortunately, there is not anywhere, on the surface of the globe, any country in which this sort of omnipresence, or anything like it, has place; not even in that country, the Anglo-American United States, in which the productions of the printing-press are most extensively dispersed: much less in Northern Africa, where even the instrument itself has never yet been in use.

Necessary to the existence of an ordinance in a binding state are three distinguishable operations: namely, scription, sanctionment, and registration.

1. *Scription.* By this understand the act of composing and committing to writing the matter in question.

2. *Sanctionment.* By this understand the investing it, with binding force, by some person or persons generally recognised as being possessed of a correspondent power.

3. *Registration*, or say recordation. By this understand the depositing and keeping, in some appropriate receptacle, the individual instrument to which the Act of Sanctionment has been applied. But for this the correctness and even genuineness of all copies, written or printed, might stand exposed to doubt and dispute.

Minute and useless will the distinction thus brought to view be apt at first sight to appear. Upon a second view nothing, it will be seen, can be farther from being so. Scarcely will that country be seen in which, throughout a vast and indeterminate portion of the field of action and legislation, an operation so essential as sanctionment will not be seen wanting to that matter to which is given nevertheless the name and binding form of law.

Thus far ordinances, appropriate and adequate to the nature of the exigency, have been supposed to be already in existence. If so, it is well. But, suppose the state of things to be a contrary case, what then is to be done?

Case 1. In relation to the matter in question, yet no ordinance of the above description in existence; but in the case of judicial decisions, the standard of reference, composed of anterior decisions, or inferences deduced from them. In the European governments, with the exception of the few instances, if any, in which codification has had place, such is the state of the rule of action, when it is in the state of what is called common law, or unwritten law. On most parts of the field of law, a quantity of matter has been written—written by men not invested, or so much as pretending to be invested with the legislative authority; and out of this huge and shapeless mass of writing, the judge on each occasion makes choice of such portions as appear to him best adapted to his purpose; to the purpose which is most agreeable to him, whatever it may happen to be. In this state of things, singularly unfortunate, if not unskilful, must that judge be who, out of so rich a granary, fails, on any occasion, to find that which is most agreeable to his wishes, whatsoever they may happen to be—to his wishes, guided, as they cannot but be, by what at the moment he looks upon as being his interest.

In the countries in question, if I understand the matter right, some of those memorials have been collected, which in England, over so large a portion of the field of thought and action, occupy the place of law. I mean that sort of matter which consists,—of statements of cases by which judicial decision has been called for, the particular decision pronounced in each case, and the general positions which have been brought forward by the judge in support and justification of his particular decision,—or of such general positions as, in the way of inference, have been deduced from it by men *volenter dissertantes*—rulers not invested with any such authority as that of a judge.

Case 2. The standard of reference referred to in judicial decisions, composed of inferences drawn, not from former decisions, but from an original standard, composed in a time of remote antiquity.

In the country in question, the standard of reference is, it seems, of this sort, and consists of the matter following:—There stands the Koran, the work of Mahomet, the universally acknowledged standard of opinion and practice in all matters of religion, as well as law. But, for a great portion of these particular cases, to which the occurrences of life are continually giving birth,—in this book, the matter being for the most part of a nature extremely general, is not capable of an application particular enough to serve as an adequately determinate guide. Influenced by this view, different persons, without concert with each other, have

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at various times set themselves to work to fill up the vacuities, all of them agreeing in the homage paid to the general positions discoverable in the sacred text, but differing from one another in no inconsiderable degree, in respect of the inferences drawn from these important positions, of which, as being included within them, application has been made. With reference to the sacred text, these works of inferior authority stand in the relation of commentaries. Throughout the dominion of the Koran, four of these commentaries have obtained the pre-eminence over all the others. Such is the degree of that pre-eminence as to have given rise, as it were, to two classes of commentaries; commentaries of the first order, and commentaries of the second order. Those of the second order being not exclusively, at least, commentaries on the sacred text, but commentaries upon those of the first order. Commentators of the first order, four as above. Commentators of the second order, not as few as seven hundred.

Though clear of confusion from that source of which indication has been given, as above, in the case of the European, and especially the English Books of Reports, and Treatises deduced from them, the eastern system fails not, however, to labour under very obvious, and such as cannot but be very grievous inconveniences.

In the first place, no one of them having taken for its object of pursuit the greatest happiness of the greatest number, none can, except by accident, have made any clearly defined provision for it in the course of such arrangements of detail as are to be found deducible from it.

In the next place, in opening out the thread of inferences, they have all of them taken, on various occasions, courses more or less different.

From all these diversities, two evil consequences, to an extent more or less considerable, cannot but have taken place. So indeterminate, in this or that case, is the bearing of some or all of these previous commentaries upon the case, that the judge, be his probity ever so great, finds more or less difficulty in determining in what manner he shall make application of them to the case.

The other consequence is, that amidst such diversity the judge, in so far as the union of disposition and opportunity produces, on his part, an inclination for corruption, seldom finds any difficulty in gratifying it.

With regard to aptitude of phraseology—aptitude of phraseology on the part of the rule of action, the source of security on the part of the members of the community,—thus much may with confidence be asserted, with reference to the most aptly penned codes of European law; namely, that, in respect of determinateness of designation, as well as aptitude, with relation to the only proper end of legislation, the greatest happiness of the greatest number, they are in a deplorable degree deficient. Continuing to apply the words which custom has applied to the several occasions on each occasion the assumption they proceed upon is, that of the word in question the import is adequately determinate,—and scarcely, perhaps, in a single instance is that assumption true.

If such is the case in the instance of these bodies of law, the authors of which, during the penning of them, set and kept before them, all along, a determinate object of pursuit, namely, the greatest happiness of somebody—the greatest happiness of the Monarch whose power was employed in giving birth to them and binding force; still more assuredly must it be the case in the instances in which the rule of action has, from time to time, been spun out, in the way of inference, from a rule which, whatever may have been the talent employed in the making of it, was yet of a mixed character; having something of religion in it, and something of law in it, with here and there a passage of history; springing the whole texture of it out of the occurrences of the day, and that day a very remote one with reference to present days, the state of society being, at the same time, in a great variety of particulars, widely different from what it is at present: widely different, and, amongst other points of difference, far less diversified.

Be the inquiry, however, ever so pressing, be the demand for new and precise definition of binding terms ever so urgent, everything cannot be done at once. With the stock of those terms, whatsoever may be the extent of it, with this stock of instruments, in the penning of the proposed securities must the scribe content himself, putting them to use in the best manner he is able.

In the character of a guide to Judges, the necessity of a collection of ordinances has just been brought to view,—of ordinances in the form of ordonnances,—of an all-comprehensive collection, covering the whole field of Legislation, and putting an exclusion upon every standard of reference that is not in that exclusively adequate guide.

But if necessary even to the Judge,—to the functionary to whose function it belongs to decide upon the conduct of the members of the community at large, pronouncing that decision which never can be pronounced without producing suffering in some shape or other from the lowest to the highest degree,—to a party or parties on one side or the other,—how much more necessary must it not be to an individual in the situation of one who every day of his life is exposed to the danger of being party to a suit for the want of being able to have access to a document which would enable him by anticipation to preserve himself from the sufferings which otherwise cannot but await him at the hand of the Judge.

If necessary to the right termination of those afflictive processes called causes or suits at law, how much more strictly necessary are they

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not to the prevention of them. Without any such forewarning and trusty instructive guides, a termination in some way or other, these courses of suffering cannot but receive; but by no other means than these means of timely information can they be anticipated and prevented.

It may be matter for consideration whether to this fundamental and all-important institution of rational government, the form of a charter—the form of a declaration of rights, or the form of a contract should be given.

If obtainable, the form of a contract will unquestionably be the more beneficial: whatsoever securities are afforded will thus be fixt upon the firmer basis. The case of a charter remains always more or less exposed to one cause of failure: being the free and sole act of the Sovereign, whatsoever is granted by him on any one day may be taken back by him on any other: when he granted it, it was on the supposition that no bad consequences would result from it: but that supposition being disproved, necessity compels him to revoke it. To this effect are the words which at any time may just as easily be uttered as any others of the same length and number: and wheresoever and by whomsoever in the situation in question uttered, no want of voices to echo them need ever be feared.

So much for charters. Charters the people in question cannot have been much used to. Contracts—compacts—all people are more or less used to: more or less in the use and expectation of seeing them kept: and, at any rate, of regarding the infraction of them as an act of injustice, and a reasonable cause of displeasure and discontent: a reasonable cause for endeavour to obtain remedy.

In the case of a charter, if it be regarded as really obligatory, there is but one party on whom any obligation attaches: in the case of a contract, there are two parties: the people forming one of them. If then the contract form be the form employed, consistency would seem to require that, on the occasion of the solemnity from which it appears to derive its sanction, there should be given by and on the part of the people, thanks to the Sovereign for his entering into his part in it:—thanks with acclamations. Thanks to the Sovereign—to God—to the prophet—to everybody—nothing of this sort need be grudged. But on their part, if anything, what more can be done with safety and advantage? Promise to obey him and all his descendants to the end of time? this would be too much: too much even although, on the part of those potentates, the condition of their performing their part of the contract were attached to the promise on the part of the people. For—what if another form of government should come to be regarded as in a greater degree contributory to the greatest happiness of the greatest number? Promise to obey his descendants so long as the contract were on their part kept inviolate, and so long as Monarchy continued to be the form of Government? This is exactly what seems desirable: but unfortunately, the more desirable on the one part, the less likely to be acceded to on the other.

In the case of England, the Whig Monarchists who brought about the Revolution in the time of James II. saw the advantage attached, as above, to the contract form; and in their arguments employed it accordingly. Their contract, however,—the *original* contract they called it—was a mere fiction: and of its being a mere fiction an evil consequence was—that, on each occasion, the terms of it remaining to be feigned,—they made them whatsoever seemed to them most advantageous to their own particular interests. But, in the case here in question, there would be no fiction, and there being two contracting parties to this contract, the terms of it might, by mutual consent of both parties, be changed at any time. So long as the terms were kept by the Monarch, the people would not be likely to feel much inclination to change: but, supposing them at any time infringed by him, it would be for them to make themselves amends, and provide for that purpose whatsoever security seemed to them most efficient: for example, the change from the mixed Monarchy to a Representative Democracy: and for the bringing about such change, the securities here in question would prepare them, by giving them power in every shape.

Section III.

Means of Multiplication of Ordinances.

In the country in question, written discourse, though not printed discourse, being in use, of whatsoever ordinances are in force as such, copies, one or more, cannot but be in existence somewhere. In the metropolis of the country of course. In the seat of the principal judicatory of the country of course. In the case here in question, the first operation therefore that requires to be performed is multiplication. For this purpose the newly invented instrument, called the lithographic press, seems for a beginning preferable to the ordinary printing press, not that there should be any reason why either should put an exclusion upon the other.

The advantages which at the outset it presents itself as in possession of are the following:

1. It is by much the cheaper.

2. It requires for the production of the effect a much less numerous association of Arts, and thence of different artists.

3. Being with difficulty distinguishable from ordinary manuscript, the use of it will be less alarming than the use of the printing press, to artists who at present are employed in the transcription of manuscript writing.

On the occasion of this as of every other mode employable for the abridgement of human labour, an effect which can never be too scrupulously attended to, and which at the

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same time has been almost universally turned aside from, is its effect on the interest—on the very means of subsistence of the working hands, the whole of whose subsistence is derived from the practice of the art in its present state. In various countries of Europe, in England more perhaps than in any other, prodigious is the mass of misery that has been produced by this means.

First branch of the evil, the distress of the labouring hands whom the introduction of the new art causes to be dismissed, and thus deprives of the means of subsistence. Second branch of that same evil, suffering in the shape of pecuniary loss and other shapes, sustained by those who, trusting to profit by the new art, dismiss in a proportion more or less considerable those hands whom they were wont to occupy in the course of the old established one: suffering, namely produced by the hostility of those who are thus deprived of the means of subsistence,—hostility exercised under the notion of its being in exercise of retributive justice.

To the great capitalist, the sufferings of these his discarded servants, to how many hundreds soever they may amount, has, generally speaking, been of little or no importance. But to no one of all these human beings, strange as it may be in his eyes, is it a matter of no importance. To each of these discarded servants, the difference between comfortable subsistence, and death, or scanty subsistence from the parish funds, is, in reality, of much greater importance than is to the capitalist the difference between the old established rule of profit to which he has been accustomed, and the new rule of profit to which he aspires. The law relative to the subject being uniformly the expression of the will, either of himself or of one belonging to a class still more insensible than he is to the miseries of men less fortunate than themselves, the act by which he deprives them of the whole of their subsistence, is never treated on the footing of a crime, or even of an offence. On the other hand, any act whereby the men, who by him have been deprived of the whole of their subsistence, shall endeavour to retaliate, by depriving him of ever so small a part of his vast opulence, is treated on the footing of a crime, and deep is the turpitude imputed to those who have defiled themselves with it.

As to the depravity, whatsoever may be the amount of it, one thing is undeniable, namely, that he in whose loss it is manifested under the circumstance of neglect in question, is the author of it, and has himself to thank for it.

In his own eyes, as also in those of his superiors, on whom the state of the laws depends, the heart of the man of opulence is no less full of virtue than his purse of money. To himself the difference in respect of profit is no object; but the public, the sole object of his regard,—the public is enriched by it. The discarded labourers, a mean and grovelling race, who care nothing about the public, experience nothing but what they deserve.

In the instance here in question, happily the evil here in question, if so it be that it requires any cure for the existence of it, requires no such cure as in the cases just mentioned. Supposing the securities in question granted, the copies the production of which will be completed, will furnish of themselves a fresh demand, for which no adequate means of supply can at the time, when the demand commences, be in existence.

But, whatsoever be the improved mode of multiplication employed, lithographic press or ordinary press, care should be taken that the employment given to it should not be such as to throw out of employment any of the existing scribes, except in so far as other employment, not less advantageous, is found for them. —Measures should at the same time be taken to prevent the influx of fresh hands into their business. If certificate of the stoppage of the demand for this art be not sufficient, even prohibition might be employed: prohibition absolute, or unless by license.

Next to the operation of multiplying the copies of these literary instruments of national security against misrule, comes the method of their distribution. Distribution is either gratuitous, or for a price,—for example, in the way of public sale.

Of copies to a limited amount, the distribution, it is true, might be gratuitous. But in such a case the demand might be indefinite; for to no man, able or not to read the characters on it, could a quantity of paper be without its uses. Exposure to sale, therefore, presents itself as an indispensable mode. But the price demanded should not at any rate be to any the least amount greater than what will suffice to cover the expense. If it were insufficient, it might be so much the better. On the side of convenience, all that is essential, is that it be not so small as that for purposes other than that of reading, it should be worth a man's while to purchase it.

Obvious and unanswerable is the reason why, so it does but prevent undue application to purposes other than those designed, the price cannot be too small. The usefulness and the efficiency—the usefulness of these securities will be as the number of the minds by which cognizance of them is taken. On this ultimate security depends the efficiency of whatsoever else can be designated by that name. For the benefit of this security, no expense that can be incurred by a number of copies, equal to those of the individuals able to read them, can be too great.

Section IV.

Application of Public Recitation to Ordinance.

As far as it goes, this operation, compared with swift exposure to sale, presents several advantages.

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1. By this means, a conception of the master document in question may be conveyed to minds in vast multitudes, to which, by any other means, it would not be possible to convey it.

2. It is not necessarily attended with any expense.

3. It is susceptible of any additaments applied to it in the view of rendering it the more impressive: of these presently.

On the other hand, the signs by means of which the conception is conveyed, or endeavoured to be conveyed, to the minds in question, being of the supremely fugitive and transient kind, their existence ceasing as soon as it has commenced, deplorably inadequate will this mode of communication uniformly be, in comparison with that which operates by signs, susceptible of indefinite permanency. Nor even for the single instant in which the communication takes place, can the conception derived be generally expected to equal that which has place in the other case, in any of the qualities requisite; namely, in clearness, correctness, or comprehensiveness: much less at any instant separated from that first instant by any considerable interval of time.

Now as to impressiveness. This quality is capable of being raised above the ordinary standard by any one of the following circumstances:

1. The rank of the person by whom the recitation is performed.

2. An extraordinary degree of aptitude on his part, in respect of the properties desirable on the part of a public reader or speaker: for example, clearness of pronunciation, strength and agreeableness of voice, propriety of intonation with reference to the occasion.

3. The place at which the recitation is made.

4. Any circumstance of ceremony with which it may be thought advisable to accompany the operation.

The discourse in question being drawn up and agreed on, the sovereign, for example, in the principal mosque, stationed in an elevated station, in which he may be seen by the whole assembly, takes the paper in hand, and reads it in a voice suited to his convenience. When read, he touches it with his seal—with the seal by which his acts as sovereign are in use to be authenticated; he touches it with his seal, and that instant a signal being given, notification is conveyed to the greatest distance by the firing of artillery, and musketry, and the sounding of drums and trumpets, or whatever wind instruments of music are in use.

After this, for the more effectual information of the surrounding audience, the best reader in all points taken together as above, that can be found, reads the paper over again, and the notifying sounds, as above, are repeated. The ceremony might be preceded and followed by a procession from the palace of the sovereign to the mosque, and back again.

After the reading has been performed, any such declarations of censure on all infractors may be added as the forms of the religion and the usages of the country will admit of.*

In those Monarchies of Europe which are called Constitutional, in them, and in those which have elsewhere sprung from them, it has been customary for the Monarch to open and close the legislative assemblies by a speech from the throne—a speech of which, though not so much as supposed to have been the framer, he is himself the recitator. But of all these general speeches one general character may be given. For the most part they contain nothing but vague generalities. They contain no enactments. They are not intended to give expression to any specific engagements. Indeed the manifest and scarcely dissembled object is to avoid binding the Royal speaker to anything—to keep his hands as free as possible. If on any occasion they amount to anything, it is when the object of them is to notify, though in the most general terms, the assent of the Monarch to a new Constitutional Code, or to any particular law to which a preeminent degree of importance is attached; or to propose, in the most general terms possible, a subject for deliberation and eventual enactment.

In the case of Tripoli, should the consent of the Sovereign to the proposed system of securities be obtained, the design, if I understand aright, is to endeavour to prevail upon him to re-echo from his own lips, not merely a form of words expressive of his assent, but the whole contents of the discourse, unless the length of it should be such as to present an insurmountable obstacle to the physical exertion necessary.

For this purpose, the example, as above, of the Sovereigns of Europe might perhaps contribute more or less to the surmounting of any reluctance of which the novelty of the proposal may have been productive in his mind.

Section V.

Notification and Publicity as to Transgressions.

By transgression, understand, as above, instances in which the tutelary ordinances, having

* In England, when concession was made by King John, and afterwards by his son Henry the Third, copies were ordered to be deposited in certain monasteries: also public maledictions to be pronounced at certain times against all infractors. These means of publicity and impressiveness proved lamentably insufficient, as the numerous recorded infractions and renewals of these *charters* (such was the name given to the written instruments) abundantly demonstrate. But the means of publicity and permanence which then had place in England, were as nothing compared with those which at present have place at Tripoli: not to speak of the ulterior ones which it might be made to have. Besides that there was no printing press, the arts of reading and writing were not to the amount of a tenth or twentieth part, or more, so extensively in use.

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been established, as above, acts of oppression, as above characterized, happen, notwithstanding, to have place.

Unfortunately in this second instance, the placing the matter in question in broad daylight, is not altogether so safe, nor yet so easy, as in the former instance.

To an operation of this description, the nature of the case will be seen opposing these obvious opponents; namely, fear, indolence, and poverty. It remains for inquiry what can be done towards the surmounting of these several obstacles.

1st. Obstacle—fear. To observe where the fear attaches, we have but to observe the parties whose conjunct labours are necessary to the production of this result.

These are, 1st. The person or persons from whom in each instance the information should come; 2d. The person or persons by whom it should be received. Furnisher of the information any person may be: a receiver of it is as such a sort of public functionary; at any rate, if so it be that he does what is required to the giving publicity to it, as he must do sooner or later, or he might as well not receive it.

In comparison with that which is offered by fear, the force of all other obstacles put together is inconsiderable.

Fear is the expectation of eventual evil, evil at the hand of all those to whom publicity, in relation to the event in question, may come to be disagreeable. Against all such fear, the most effectual of all securities is *concealment:* concealment of every person by whom anything has been contributed to the publicity of the obnoxious state of things.

Known it is necessary they should be—known to the functionary by whom the information is received or extracted, were it only for the sake of eventual responsibility, in case of disturbance given to the peace of the community and of individuals, by false accounts. To one functionary, or perhaps one set of functionaries, it is necessary that for this purpose every person contributing to the furnishing of the information, should be adequately known: known to the purpose of being eventually forthcoming to the purpose of being subjected to punishment, in case of mendacity or injurious temerity. But to no other person is it necessary that he should be known.

Next come the several persons by whom any part is borne towards the giving permanent and appropriate publicity to the information when received. At one stage or other, some one person at least there must be—naturally persons more than one—whose agency in the business cannot be kept concealed: concealed, that is to say from those from whose power vengeance will naturally be to be apprehended. But when any one person is known, as having borne a part in it, the greater the number of the persons thus known to have done so the better: the greater the number, the higher their situation (meaning their official situation) and the more dispersed their several situations—meaning their topographical situations. For the higher their official situation and the greater the number of the persons occupying these several situations, the more dangerous will it be for the oppressor to endeavour to extend to them his oppressing hand: the higher and more numerous the more dangerous, and the more dispersed the more difficult.

Suppose, for example, by one such functionary, or set of functionaries, information of an act of oppression received and committed to writing. If their situation is that of a set of functionaries constituting a Judicatory of the higher order, then suppose a copy sent to every Judicatory in the Dominion, and by the joint authority of them all made public at one and the same time: made public by whatsoever means of publicity happen to be at their command. Here the security against vengeance from the oppressor is at its maximum: unless it should be deemed advisable, that from this branch of the authority of the State, communication be also made to the Military.

2d. A Case may be supposed in which whether fear have place or no, indolence may oppose a bar, more or less powerful, to communication. Suppose the oppressed party alive and in condition to act, indolence is not in his instance very likely to take place. For affording the requisite excitement, the desire of compensation and vengeance will, generally speaking, be sufficient. But to him, even though living, it may happen that the injury is not for some time known; and the case in which the oppression—the injury—is at its maximum, is that in which adequate excitement is most apt to be wanting. This is the case in which, by the oppressive act, the life of the victim has been made a sacrifice. In this case, whether any connexion of his disposed to come forward and seek redress, be in existence, will be matter of accident. In one case, and that not a very uncommon one, the non-existence of any such person will be an occurrence altogether natural. A dead body, say at the dawn of day,—the dead body of a man is found lying on a high road or some such public place, and for some time nobody knowing whose it is, by no connexion of his is the catastrophe known or suspected.

In a case of this sort, the object is to obtain information from the first person to whose senses the spectacle has happened to present itself in the first instance. Here, for surmounting the resisting force of indolence, three active forces present themselves: appeal to the social affections by a standing authoritative and appropriate discourse, punishment in the case of non-performance, and reward in the case of performance, of this public service. Of these instruments, whether one or more, or all, may with most propriety be applied, will depend upon circumstances; circumstances too particular to lay claim to a place here.

3d. Obstacle—poverty. Understand rela-

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tive poverty—inability to defray the expense, whatever it may be. Of the operations necessarily preparatory to the ultimate publication above brought to view, an indefinite number may, any or all of them, be unavoidably attended with an indefinite amount of expense. 1. Collecting from places in indefinite number, each of them indefinitely distant, persons capable of serving in the character of reporting, or say, deposing witnesses. 2. Committing to writing the result of their respective depositions. 3. Transmitting from Judicatory to Judicatory, from office to office, copies of the written instrument to which the statement of the case was first consigned.

Though provision might, in some way or other, be made for them, the case required that these several sources of expense should be brought to view. In what particular way any such provision may most conveniently be made will depend upon local circumstances, such as are not within the cognizance of him by whom these particulars are offered to view.

Note here, that as well upon those who are likely to be most willing, as upon those who are likely to be most unwilling, should the tone of whatever ordinances are issued for providing publication be as forcibly imperative as possible. The more irrisistible in appearance the coercive process, the greater will be the security given to him in whose breast any desire to co-operate towards the beneficial effect in question has place: against the wrath of the offended and denounced oppressor he has coercion to plead as his excuse.

Section VI.

Notification and Publicity as to Suffrages—Newspapers: Letter Post.

To the subject-matter thus denominated, the operations which apply to the purpose in hand will be seen to be the following, viz. 1. Extraction. 2. Registration. 3. Multiplication. 4. Transmission or say diffusion.

For all these several operations one and the same instrument presents itself as the efficient and the only efficient instrument. This instrument is no other than a Newspaper: multitude of instruments of this same sort employed by so many different sorts of hands, and multitude of copies of each, as great as possible.

In this instrument may be seen not only an appropriate organ of the Public-Opinion Tribunal, but the only regularly and constantly acting visible one.

In this same tribunal it is by the Newspaper Editor that in each case the motion in which the decision originates is made: and thus much of the matter is no fiction, but the exact truth. Thereupon come the suffrages;—suffrages given by those members of the community being at the same time readers of the Newspaper, or in converse with those that are,—so when it happens to take cognizance of the matter. These suffrages being, from the nature of the case, incapable of being collected, the number of them must in each case be left to inference and conjecture. Meantime thus much may be remarked, namely, that in the instance of each person it is by the real and true opinion, the real and inward affection, not the opinion and affection declared and avowed, that the salutary effect or the check applied to misrule is produced: for it is by opinion and affection really entertained, and not by the opinion and affection professed to be entertained by a man that an action in the shape in question is produced.

Newspapers, suppose, two taking different sides of the question in each case: one suppose the side of the suffering people; the other the side of the oppressing Sovereign and his misrule. Here the case is rendered more complicated; motions the tenor of them in every instance visible and permanent. Suffrages expressed or not expressed, *i. e.* with or without tenor, but in both cases, invisible and evanescent. Of these suffrages some are on the side of one of the writers, others on that of the other.

Greater is the efficiency of this one sort of written instrument than that of all other written instruments put together. On this and that question pamphlets and books, works, small and great, may be written. But by no one of them is any regular cognizance taken of the several occurrences as they take place: for by any publication, suppose any such regularity and constancy of attention kept up, it becomes the very thing here in question, *i. e.* a Newspaper.

In a Representative Government, at any rate in a Representative Democracy, with the exception of the function of the principal Minister, more important is the function of this unofficial functionary than that of any official one. More important, that is to say, in particular to the great purpose here in question—that of making application of the power of the Public-Opinion Tribunal in its highest character and by far the most beneficial one, of a check upon misrule. Of this superiority the causes are—1. In each individual instance the greater number of the suffrages on which the motions made by these Representatives of the people are taken for their ground, the motions made by these unofficial compared with those made by any official representative. By the Prime Minister impulse is given to the machinery of the political sanction: by the Editor of the prime popular Newspaper to that of the Social Sanction.—But, 2. more particularly the constancy and continuity of action which has place in this case—sources of influence in respect of which no official Representative limited as his motions and discourses are, to particular and scattered reasons and scattered points of form can hold comparison with him.

The aptitude of the Newspaper in question, with reference to the greatest happiness of the

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greatest number being given, its usefulness will be as the extent to which the diffusion of it has place: in other words, as the number of the persons to whose minds it finds its way.

The circumstances on which the degree of that extent depends, in particular at the outset of the sort of institution in question are, 1st, the constancy; 2, the frequency, of its publication; 3, its mixture with matters of a nature universally interesting; 4, its cheapness—the smallness of the price; 5, the impartiality of its procedure in respect of the admission or rejection of articles; 6, the moderation of its language, *i. e.* its purity from expressions of vague and ungrounded vituperation and laudation of men and measures.

Of the several qualities the three first are at the same time the most essential, and the most easily secured to it, as being those that are the most completely independent of the mental qualities, moral and intellectual, of individuals.

1. As to constancy. This quality is of all others the easiest to secure. It is moreover a matter of prime necessity that the institution be so conducted. The interest created and kept up by it cannot but be in the closest degree dependent upon the assurance with which, on the occasion of each paper, a reader looks forward to a regular succession of the like entertainment provided by the same hands. So invariably is this property possessed by this species of discourse wherever it has place, that the absence of it not being presented by experience, is not easily presented to view by imagination.

2. Next, in the order of importance, comes the quality of frequency. The number of readers being given, the greater the frequency of its appearance, the greater the degree of diffusion. Nor, in the instance of the aliment thus administered to the mind, is the appetite slackened by the frequency of its application, as in the case of the aliment administered to the bodily frame. On the contrary, it is rather kept alive and invigorated,—the meal of each day operating as an excitement to look out for that of the next day following.

3. Variety, admixture of the political matter with matters of other sorts, in the greatest variety possible. What gives this property an essential claim to notice, is—besides the degree in which the amount of diffusion depends upon it—that it is so little dependent upon the talent employed in the conducting of it.

Suppose, for example, six sorts of matter, each of them interesting to one class of readers, no one sort interesting to classes more than one. By this means, you have six times as many readers, and regular purchasers, as if there were no more sorts of matter in it than one. Each class stands assured of having something in which he takes an interest. As it is on no other terms that he can get anything, no one of them is debarred from the purchase of his one-sixth by the consideration that without more than that sixth it is not obtainable.

When this variety of entertainment is kept up, no imaginable literary composition can, in respect of attractiveness, by possibility enter into competition with this, nor, in particular, with reference to the uses here in question. From the physical association—the contiguity of the natural and visible signs—an association is instantly formed between the ideas of which they are respectively the representatives. Taking up the newspaper, each one is upon the look-out for the matter of that sort in which he takes a more particular interest; but while he is upon the look-out for that, matter of all other sorts is continually offering itself to his eyes. Little by little the dryness and repulsiveness of each wear away; each, in some degree or other, becomes more and more familiar to him. And even supposing that matters in which he takes no interest at all, are regularly passed over without a glance, still of those in which he takes some interest, the interest is, little by little, increased.

In what abundance, by the mere circumstance of the being among the contents of his newspaper, a man is led to the reading of articles for which he would not ever have looked in any publication exclusively appropriated to the reception of them, is a circumstance which can scarcely have escaped any person's experience.

5. Impartiality,—its uses. Wheresoever there are newspapers, there will be, or rather are already, parties; and wherever there are parties, all minor divisions naturally fall under one all-comprehensive division,—the assailants and the supporters of the party which has the power of the country in its hands. If there be any tolerable degree of freedom, a newspaper can hardly have place for any length of time, but rival newspapers, one or more, will start up likewise. Be the number of newspapers ever so great or ever so small, great would be the advantage, in respect of extent of currency, if the editor could prevail upon himself to keep up an impartial course between the two parties,—to give equal admission to attacks and to defences. Obvious altogether is the advantage which the course thus prescribed by justice would secure to him. Readers of all parties would be invited. No readers of any party would be repelled. Number of readers of each party suppose equal; on this impartial plan, the number would be the double of that which it is on the ordinary partial plan.

But, for securing to the instrument of instruction this at once most respectable and most difficult endowment—and this without prejudice to the diffusion of it—what would be the most eligible course? not to make controversial matter on either side, but to admit it on both sides. By the sacrifice of this stimulating matter, the publication would be rendered, by the double and reciprocal insertion, doubly excitative and attractive.

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On the part of a newspaper editor, nothing is more easy than to profess impartiality; few things more difficult than to maintain it. But if, in the highest degree, utility depends upon impartiality—upon actual impartiality—in a not much inferior degree does it depend upon the reputation of impartiality,—upon the proportion between those of his readers, in whose eyes he is impartial, and the number of those in whose eyes he fails in respect of a quality so highly desirable: and unhappily he may be in ever so high a degree actually impartial, and yet, and even from that very cause, be partial in the eyes of both.

For keeping up impartiality without diminution of frequency, the most effectual course, supposing extent of sale to permit, would be for the proprietor of the newspaper to employ two editors, one whose assertions were on the one side, the other whose assertions were on the opposite side: the number of days in the year allotted to each being the same. Why not? The answer is, lest in that case there should be a correspondent alteration and division among the customers: one set buying the paper on the government day and not on the opposition day: the other on the opposition day and not on the government day. Not that the greater part of the readers would thus content themselves with no more than half the aggregate stock of facts. But still some there would be, and antecedently to experience it would not be possible to say how many. As to any endeavour to conceal this part of the arrangement it would neither be practicable nor desirable. To exclude fraud and injustice, and to secure harmony, some arrangements of detail would be necessary; nor does the securing such as would be adequate present to view a task of any considerable difficulty.

6. Moderation, or say good temper. Unhappily for securing this quality, important as it is, there is no such simple and effectual recipe as hath been shown to have place in the case of impartiality.

Of moderation, the simplest and clearest description, as far as it goes, that can be given is—the avoiding to employ for the giving expression of disapprobation, whether of men, or measures, or modes of action, any words or phrases of vague and violent vituperation, that express aversion or displeasure, without any precise designation of the cause of it.

Of every violation of the laws of moderation, various and serious are apt to be the evil consequences.

1. By the disgust which it cannot but produce it tends to exclude readers to a number altogether unascertainable and unlimited: and among them not only those who are decidedly attached to the party whose sensibility is thus wounded, but others who are neutral, indifferent, or undecided.

2. By the hostility thus manifested correspondent hostility on the opposite side cannot but be provoked.

3. Among the consequences of such hostility prosecutions—attacks in the field of Judicature will, with more or less frequency, have place.

Hints respecting the best plan for the conducting of a Newspaper.

1. One sort of article by which an interest, more or less exclusive, cannot fail to be excited, is—an indication of sights to be seen: things offered for purchase or hire: prices of goods of various sorts at various places: probabilities in respect of future increase and diminution of price.

2. *Accidents.* At all times, by occurrences of this sort, more or less of interest can scarcely fail to be excited in most breasts. The greater the interest taken, the greater the assistance and encouragement afforded to the sympathetic affection: that affection, upon the strength of which morality and felicity so essentially depend.

3. *Offences.* Of matter under this head, the usefulness is of prime importance with reference to the particular design here in question. Of the misdeeds of various sorts from time to time committed, few in comparison, at the utmost will be those committed by the order of the sovereign, or which it is matter of pleasure or advantage to him to see committed. For the greater part they will be of that class by which, while no profit in any shape is produced to men in power, as such, suffering is produced to individuals, and through individuals, danger and alarm to the community at large, and thereby to the Members of Government in the quality of members of the community at large. This being the case, to the publication of misdeeds in general no aversion will be excited in their minds, no objection will have place in their eyes. But the habit of writing and reading accounts of misdeeds of all sorts being once established, mention of the misdeeds committed by or agreeable to men in power, will find their way in along with the rest—will slide in unobserved by the editor, or at least, as if unobserved. And thus the way will be paved for the general admission of misdeeds, in the commission of which the man in power has an interest, or imagines he has an interest.

4. *Proceedings of Courts of Justice:* especially that of the Cadi in the metropolis: being that by the proceedings of which the greatest interest will naturally be excited.

5. *Deaths.* Number of in the metropolis, and other principal towns: according to a periodical enumeration, if obtainable. In the case of those of remarkable persons, their names given with any particulars that can be collected of their characters.

6. *Births.* Those of persons of the male sex may be ascertained by the acts of circumcision: of which a register, if not actually kept, might,

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it is supposed, without much difficulty, be caused to be kept, by the Imans and Notaries of the several mosques.

7. The like occurrences in the demains of the neighbouring states.

8. Parallels between the particulars indicative of the state of society and manners, as between the state in question and other Mahometan States on the one part, and Christian States in general, or in particular, on the other.

1. Points on which the advantage appears to be on the side of the Mahometan States.

2. Points on which the advantage appears to be on the side of the Christian States.

In all these cases, constant standard of reference the greatest happiness of the greatest number.

9. Indications of physical inconveniency; with or without hints respecting the most eligible means of remedy.

To each class of articles, as above, there might be a use in prefixing the denomination of it on a separate line and larger type; as thus:—ACCIDENTS; OFFENCES; DEATHS. By this means, 1. Readers would be directed instantaneously to the class, whatever it were, in which he happened to have an interest. 2. The attention would, by this perpetually recurring excitement, be kept awake. 3. By these exemplifications the minds of the readers would be familiarized with the practice and general conception of commanding arrangements.

A degree of diffusion sufficient for continuance being supposed to be already established, now then comes the question,—concerning the general usefulness of it, by what means it may be raised to the highest pitch.

In the first place, as to the only right and proper end of sound action, the greatest happiness of the greatest number. This all-ruling, all-comprehensive, and all-important principle, though not on every occasion brought forward and held up to view in its own name, should, on every occasion, be inwardly kept in view: and even by name, the greater the number of the occasions on which, without exciting abuse and disgust, it can be brought to view the better. For by it a standard is held up, the only legitimate standard by which the mischievousness of misdeeds can be proved, and the degree of it measured and indicated.

Every occasion should be embraced of making application of the greatest happiness principle to the individual occurrences of the day, showing, 1. How morality and happiness depend upon the notoriety of the rule of action referred to by the Judicatories. 2. The advantage of the greatest degree of equality consistent with security in the distribution of the external instruments of felicity in all their shapes: in particular, power and the matter of wealth in all its shapes. 3. Showing how compensation to all sufferers by a misdeed in any shape ought to take place of punishment, because the burden of affording compensation operates as punishment so far as it goes; how punishment should be adapted to misdoing, that by allotting to the more mischievous misdeeds, the more severe punishment, those who cannot reform from misdoing altogether, may be induced to commit the less mischievous in preference to the more mischievous, &c. &c.

Particulars of the mass of literary capital to be provided antecedently to the commencement of the publication of a work of this sort.

Antecedently to the setting up any such newspaper, it would be highly advisable to have a stock more or less extensive of foreign newspapers, to serve as sources out of which heads of information would be brought to view, and might be selected. Of all newspapers the English are by far the most instructive. Next to them, those of the Anglo-American United States. In comparison with these the French are worth but little; the newspapers of all other nations put together nothing at all. The public demand which it is hoped will accompany the paper, will serve to show the prodigious number of articles of this sort that are every year published in England;—also the enormous revenue derived from them: always remembered, that this is among the worst of all sources of revenue, and more especially so would it be in any country in which newspapers are set up for the first time. The reason is, that to an extent more or less considerable, every tax operates as a prohibition, a prohibition applied to the sort of articles taxed: as in the instance in question, though a bounty would not be necessary, a bounty would be less monstrous than a prohibition.*

Suppose a dozen boys receiving at the school in question† their education, the most useful and thence the highest occupation which the best head among them could be put to, would be that of editing a newspaper on his return to his own country. The master might choose for this purpose the most promising, and he might be trained to it even at the school itself before his return.

Antecedently to the setting up as above, a stock of matter should be prepared and kept in readiness: various kinds of matter being tried for the purpose of observing and knowing which of them excited the most interest. As the publication went on, various articles of every sort, advertisements in particular, would of course be sent in by those whose taste were pleased, or their interest, as it seemed to them served. As thus miscellaneous and ever highly interesting matter by degrees came in, the less interesting matter belonging to the

* See farther on this subject p. 571, supra.

† From the memoranda and correspondence of the author in connexion with this subject, it would appear that part of his project was the education of young natives of Tripoli, in Britain; but he does not appear to have put this part of his recommendation definitively into form.—*Ed.*

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original stock would give way to it. It is of the utmost consequence that on no appointed day whatsoever any failure of the appearance of the paper should take place: and by the preparatory stock in question, all such failure might effectually be prevented.

Production and multiplication are effected by newspapers: conveyance by the letter post.* These and whatever other documents require, for the production of their intended effect, to be sent to a distance, are of no use, but in proportion as they are conveyed to their respective destinations. Between any two places in the dominion in question, is there any such establishment as a post for letters? A messenger or chain of messengers travelling at stated intervals between the one and the other? Between the capital, for instance, and the two Universities, or one and which of them? The first thing to be done in this way would be to establish a system of communication of this kind between the office of the Cadi at the capital, and the several judicatories. Next to that would be the establishing the like between each judicatory and the several mosques within its territorial field of jurisdiction, messengers one or more going the circuit among the mosques.

In time, pay received for letters sent from individuals to individuals, might lessen the expense to government. As the number of persons who read and write receives increase, so will the receipts of every such establishment. But at no time should any of these receipts be made a source of revenue. A tax on the intercourse between man and man being a prohibition on all who cannot afford to pay the tax, cripples social intercourse: cripples it for all sorts of purposes, and nips all improvement in the bud.

Of the proposed system of communication, the direct as being the most important object is—personal security; and in particular security against oppression by the hands of rulers. But a system of communication, if once established for the major purpose, will apply itself of itself to all minor purposes. It will contribute to the efficiency of the judicial power as applied to its more obvious and more ordinary purposes. It will contribute to the security of individuals as against injury by individuals.

It will contribute to the increase of commerce: in regard to each article, making known to each possessor of a surplus beyond his occasion, where those individuals are to be found, who, to the desire of possessing the article, add the means of paying for it. Whether for the mere chance of finding individuals in sufficient number able and willing to make use of it for merely commercial purposes, it would be worth while to establish a system of communication in the first instance, would be matter of uncertainty calling for calculation; but, on the supposition that it would be worth while to establish it for the sake of security alone, any the least chance of its being contributory to the increase of commerce, that is to say to the increase of opulence, cannot but operate as an additional probable benefit, and as an additional inducement.

Meantime, in the early state of the establishment, by whom shall the expense, whatever may be the amount of it, be defrayed? A question this which, where any advance is proposed to be made in the track of civilisation, is unhappily obtruding itself at every step. As to the sovereign, the funds of the state, which are all of them his funds, are never sufficient for so much as his own personal expenses; never sufficient, as yet, nor in the nature of the case, under such a form of government, ever likely to be so.

Soldiers in a certain number—say 8000, are at present kept up. If of these a certain number were regularly employed as letter-carriers, they would not be the less fit for service in the character of soldiers: they would be the more fit. By thus changing their situation, these messengers would thus become every day better and better acquainted with the country; and in that way as well as others, be by so much the fitter for service in their character of soldiers.

A slow conveyance, so it were but regular and constant; a slow conveyance extending over a large portion of the territory, might be preferable to a more expeditious one extending over a less portion of territory. For quick conveyance, horses, mules, or dromedaries, would be necessary; but by this means the expense would perhaps be doubled. In certain districts, camels would be necessary for the carriage of the water necessary for subsistence; but this would be only in certain districts.

CHAP. IV.

THE SECURITIES IN DETAIL.

PART I.

SECURITIES IN FAVOUR OF THE NATION CONSIDERED IN THE AGGREGATE.

SECTION I.

Securities against Vexation on Account of Religion.

ART. 1. Provided that it be in a chamber enclosed and covered, and that the eyes of the true believer be not annoyed by public ceremonies

* What follows was written, as appears from the dates on the MSS., some months previously to the above considerations as to newspapers: and the circumstance that the subjects though intimately connected with each other were separately treated at different periods, will account for any want of connexion that may appear in the arrangement. —*Ed.*

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or processions, with religion for their cause or pretext, or his ears by the sound of bells or other noises: provided also, that by no religion shall any justifying cause be made for causing suffering in any shape to any individual in respect of person, property, reputation, or condition in life:—Every person is at liberty to perform divine service after his own manner. For this purpose any persons without exception may assemble together in private or in public.

Art. 2. Every person is at liberty to write and publish whatever he pleases on the subject of religion, even although the truth and the goodness of the only true religion be impugned thereby: by the true believer, that which is adverse to the only true religion, will either not be read at all, or read with the merited contempt.

Counter-Security. Provided that no writing or imitative figure, containing matter thus odious to the only true religion, be exposed anywhere to view in such manner as to be offensive to the eye of the true believer as he passes. For any such exposure, any person is responsible to the purposes of punishment.

Art. 3. Every person is at liberty to speak what he pleases on the subject of religion, even although the truth or the goodness of the only true religion be impugned thereby: by the true believer, that which is adverse to the only true religion will either not be heard at all, or heard with the merited contempt.

Counter-Security. Provided that no discourse whereby either the truth or the goodness of the only true religion is impeached, be uttered in any public place in such manner as to be offensive to the ear of the true believer as he passes: or in the presence and to the displeasure of any true believer in any private place. The utterance of any such discourse in the hearing of a true believer is an injury to him, and as such may be punished according to law.

Section II.

Securities against National Gagging: or security for Appeal to Public Opinion and the Power of the Law, on the subject of the conduct of all persons whatsoever, functionaries as well as non-functionaries.

Art. 1. Every man is at liberty to express as well by visible as by audible signs, and in any way and to any extent to make public, whatsoever in his judgment it will be contributory to the greatest happiness of the greatest number to be informed of: and this although disapprobation be thereby expressed towards persons in authority, or any of them, whether on account of the general tenor of their conduct, or on account of their conduct on this or that occasion in particular.

Counter-Security. Provided always, that for any injury thereby done to the reputation of any individual by false imputations, every person concerned in the doing of such injury is responsible to the purpose of reparation and punishment at the suit and for the benefit of any individual or individuals injured: and that, for anything which being so expressed, has for its object the exciting men to the commission of this or that particular offence, any man shall be responsible as above, according to the nature of such offence.

Art. 2. If, on account of any indication given of supposed delinquency in any shape on the part of any person, non-functionary or functionary, a party be proceeded against at law as for injury to reputation, proof of the delinquency so indicated shall be received as a cause of justification; and for the making of such proof, the testimony of that same individual on whom the delinquency is charged, may be extracted in the same manner as that of any other person.

Art. 3. All persons are at liberty at all times and in any number, to hold converse with one another on all subjects in general, and on the subject of the conduct of persons in authority in particular: and on the means of rectifying whatever may be amiss either in the conduct of rulers or in the form of the government, to hold converse, namely, as well in the way of correspondence at a distance, as in presence: and if at a distance, and thence through the intervention of others, as well by written as by oral discourse.

Counter-Security. Provided always, that if for the prevention of evil to person or property, it shall at any time be thought good by the proper authority, for limited time, to prevent or inhibit persons at large from coming together in numbers greater than are capable of hearing from beginning to end, the discourse of the same speaker at the same time,—especially in the night-time, and with arms about their persons: in any such case, that which shall be so done to this purpose, shall not be considered as done in breach of this article.

Art. 4. Every act having for its object the production of the effect thus denounced, under the term National Gagging, is placed as above in the list of injurious acts. Every person who has knowingly any part in the production of it is accordingly punishable by the obligation of making reparation, with or without punishment in another shape, according to the shape in which the injurious act has shown itself.

The *right* of which the offence thus denominated is the infringement, is the right of exercising influence in the choice of the whole number of those members of the community by whom a public function in any shape is exercised, and of declaring an opinion on their conduct, as well as that of every other individual in whose good conduct all members without exception have an interest; the right of censorship, including the right of receiving and writing communication relating to the information which, to be just, the exercise of this function requires a man to be possessed

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of: in short, the possessing on each occasion in a manner sufficiently correct and extensive, the proper grounds of censorship.

Right Recognised. Giving expression and publicity to all facts and observations which, in the judgment of the individual in question, promises to be contributory to the greatest happiness of the greatest number: whether the tendency of the correspondent information be to raise or depress this or that person in the scale of public estimation.

Correspondent acts of power prohibited, as being violations of these rights, and thereby put upon the footing of punishable offences—punishable in the same manner as they would be if exercised by persons not invested with any such power.

1. Punishing, or endeavouring to contribute to the punishing of, any person for having given utterance to any discourse to the effect in question, expressed by audible signs.

2. Punishing any person for giving expression to such discourse by visible signs: that is to say, in characters written or printed.

3. Punishing any person for transferring to another for a time, or in perpetuity, either gratis or for a price, any paper in which such signs stand visible.

4. Seizing, detaining, destroying, or damaging any paper or other substance, on which signs expressive of the sort of discourse in question are marked. Issuing or contributing to the issuing of any order for such seizure, detention, destruction, or deterioration—giving or contributing to give execution to such order.

5. Obstructing by force, intimidation, or deceit, the meeting of persons in any number, in any place in which they have individually any right to station themselves,—obstructing them while in the act of making communication of such their observations, and the opinions and wishes suggested by them. In a case where physical force is thus employed, the act of applying it is a corporal injury: where the same effect is attempted to be produced by deceit, it is a fraud.

6. Seizing the body of any person so occupied, thereby infringing his liberty of locomotion. Corresponding offence—injurious confinement.

7. Seizing any paper, writing, printed book, or other visible instrument of discourse, having for its object the making two or more persons assemble for any such purpose as above. Corresponding offence—violation of private writings—of visible instruments of communication between man and man.

8. Consequences in respect of eventual acts of corporal injuriation, (homicide included,) in prosecution of the above forbidden designs:—

Art. 5. In case of any bodily contest between persons occupied in the exercise of any of the above rights, and other persons, functionaries or non-functionaries, occupied in the endeavour to give disturbance to such exercise, any wound or other suffering unavoidably produced by the exercisers or any supporters of theirs in the way of self-defence, is lawful and unpunishable: but if produced by the disturbers on the persons of the exercisers, unlawful and punishable: punishable in the same manner and degree as if no such pretence had been set up.

Art. 6. On the occasion of any such contest, all persons are warranted in giving assistance to the exercisers: no person is warranted in giving assistance to the obstructors.

Art. 7. So in regard to damage done to property in any such bodily contest: damage unavoidably done by the exercisers or their assistants to property of the obstructors is lawful and unpunishable: damage done by the obstructors or their assistants is unlawful and punishable.

Section III.

Securities against National Disarmament and Debilitation.

Art. 1. All persons are at liberty to keep arms of all sorts, to wit, either in their own habitations or elsewhere, at their choice: also to exercise themselves, and cause themselves to be trained, in the use of arms, whether it be separately or in any numbers.

Art. 2. Also, singly or in companies of any number, to carry arms about them for their own defence.

Counter Security. Provided always that if for guarding against temporary oppression of the greater number by sudden insurrection of the smaller number under favour of surprise, it shall at any time be thought good for the proper authority to inhibit such assemblies from having place otherwise than after due notice, neither shall any such inhibition, nor any necessary measures taken for giving effect to it, be considered as amounting to a breach of this article.

So if to prevent slaughter, spoliation, or oppression of individuals by individuals, it shall seem good to the proper authority to prohibit the carrying of offensive arms in this or that particular place, or by this or that particular person or set of persons, or on this or that particular occasion, or during this or that particular time; or to prohibit all persons from carrying any offensive arms in a concealed manner at any time.

Otherwise than as above, every act having for its object the production of the effect of national disarmament and debilitation, is placed in the catalogue of injurious acts.

The rights of which, the offence thus denominated is a violation, are:—

1. The right of putting and keeping one's self in a state of aptitude, in the character of a member of the armed force of the community.

2. The right of exercising one's self, and being exercised in the use of arms.

Correspondent acts of power prohibited, rendered unlawful, and as such punishable as

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being acts of violation with reference to the above rights: punishable as if exercised by persons not invested with power.

1. Punishing any person for having been occupied in training himself, or being so trained, or in training any other person.

2. Punishing any person for repairing, for the purpose of being trained, to any place in which for any other purpose he had a right to station himself.

3. Punishing any person for giving invitation to others in any shape, either oral or graphical, to engage in any such exercise, or to meet others for the purpose of such exercise.

4. Obstructing, or endeavouring to obstruct, by force, intimidation, or deceit, the meeting of persons in any number for this purpose.

5. Obstructing them as above in the commencement, or continuance, of the set of operations here in question.

PART II.

SECURITIES IN FAVOUR OF INDIVIDUALS.

SECTION I.

General Declaratory View.

ART. 1. No person shall, against his will, or against the will of those under whose guardianship he is placed, as the case may be, be arrested, imprisoned, or otherwise confined, except for the purposes, and on the occasions, and in the manner, determined and declared by law.

ART. 2. No person shall, against his will, or against the will of those under whose guardianship he is placed, as the case may be, be sent or kept out of the dominion of the State, or any part thereof, except for the purposes, and on the occasions, &c. (as above.)

ART. 3. No person shall be put to death, but for the purposes and on the occasions, &c. (as above.)

ART. 4. No person shall be mutilated, disabled, bruised, wounded, or otherwise made to suffer in any part of his body, except for the purposes, and on the occasions, &c. (as above.)

ART. 5. Of no man shall any personal service in any shape be exacted, except for the purposes, and on the occasions, &c. (as above.)

ART. 6. On the security of no man's property shall any infringement be made, except for the purposes and on the occasions, &c. (as above.)

ART. 7. On the security of no man's private writings shall any infringement be made, except for the purposes and on the occasions, &c. (as above.)

Of the security of a man's private writings it may be an infringement, if, against his will declared or justly presumable, they be placed or kept out of his custody, within or without the dominions of the State, or destroyed, or inspected, or seized, for whichsoever of these or any other purposes it be.

ART. 8. When, for giving execution and effect to the law, it becomes necessary, in virtue of the exceptions mentioned in the above articles, to make infringement on the security of body or goods, no such infringement shall be made beyond what the necessity of the case requires. For any farther injury to body or goods, all persons therein concerned, functionaries or non-functionaries, shall be deemed trespassers, and as such responsible in respect of burthen of compensation and punishment, in the same manner as wrong-doers at large.

SECTION II.

Securities against secret confinement: for protection of the persons of individuals against oppression by persons in authority, without, or even with the knowledge of the sovereign.

ART. 1. Wherever, on the alleged ground of its being in furtherance of the purposes of justice, the person of any man is put under confinement, information thereof shall be given in the most public manner, to the end that all persons taking an interest in his welfare, may have it in their power to take lawful measures for securing him against injustice.

ART. 2. To this end the name and situation of every habitation, designed by authority to be used as a place of confinement, whether on the score of delinquency or of insanity, shall be entered in an appropriate register, an exemplar of which shall be kept in the metropolis in the office of the chief Judicatory: and of this exemplar a copy shall be kept in the office of every other Judicatory.

ART. 3. On the commitment of an individual to any such place of confinement, entry of such commitment shall be made in a register to be therein kept for that purpose, mentioning the name by which, on his own declaration or memoir, such individual is distinguished: the person or persons by whose hand he has been brought to prison: the person or persons by whose authority he has been brought to prison: the cause for which he is so committed: the time for which he is so committed: and the evidence on which such commitment has been grounded, —a sufficient description by name and memoir of every person on whose testimony the commitment has had place being added, as also the cause for which the individual has been committed.

ART. 4. Within [ ] hours after the commitment of the prisoner, a copy of such entry shall be pasted up over the door of the Judicatory, in such characters and situation that it shall be legible to all passengers.

ART. 5. If at any time, by any special necessity, the commitment of the prisoner to the appropriate prison be rendered impracticable or improper, any other building, public or private, may, for the time, be employed for the purpose, care being taken that the vexation thereby occasioned, as well to the occupant of such building, as to the prisoner, be as little as possible; and that at the expense of

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the prisoner, if found guilty, or otherwise at the public expense, (if there be funds sufficient,) compensation be made to the occupant for the vexation: for which reason also, that building which for this purpose may be employed with least vexation—compensated or uncompensated, to the occupant, must be in each case preferred.

Art. 6. Cases for which, instead of the ordinary appropriate prison, an extraordinary prison as above may be employed, are as follows:—

1. The ordinary prison being rendered incapable of holding the prisoners without danger to health or safe custody, by reason of its fulness.

2. —— —— er by want of repair.

3. —— —— or by unhealthiness,—produced, for example, by contagious disease.

4. The ordinary prison rendered by distance inaccessible without halting for repose.

5. —— —— or rendered inaccessible by hostility on the part of enemies, foreign or domestic.

6. —— —— or by danger of forcible rescue.

Art. 7. If in any such occasional prison a person be detained more than (24) hours, over the door there shall be posted up a paper, such as that described by Article 4 in the case of an ordinary prison, and for the framing or attestation thereof, the assistance of some Iman be invited: that of the Iman of the nearest mosque in preference.

Art. 8. On the commitment of a person to any such extraordinary prison, the bringer shall give the earliest possible notice to the keeper of the ordinary prison, and to the President of the Judicatory in whose district the extraordinary prison is,—of the fact of the detention, together with the cause by which it was rendered necessary, and whether such notice as should have been fixed up, as above, is or is not fixed up, and if not, why not.

Art. 9. The bringer shall make known to such keeper of the ordinary prison, and such judge, the fact of such detention at the extraordinary prison, together with the causes and circumstances of it: if he omit so to do, the detention shall, during the omission, be deemed unlawful.

Art. 10. Every person who knowingly and wilfully has been contributory to the injurious imprisonment of any person, shall himself suffer imprisonment for a length of time equal to that during which the party so injured was imprisoned; and shall, moreover, to the extent of his means, be compelled to furnish compensation, in a pecuniary shape, for the injury.

Art. 11. Any person by whom it shall be known or suspected that, in a certain building, or other receptacle, a certain person is kept in confinement, may repair to the keeper, and require to be informed by him whether such person is actually under his custody. If, being so interrogated, the keeper refuse or forbear to make answer, or make a false answer, he shall suffer condign punishment, and if, at the time of the interrogation, the person in question was actually in his custody, shall be punished as having been guilty of injurious imprisonment.

Art. 12. To the interrogation, whether the person in question be at that very time in the custody of such keeper, may be added the interrogation, whether, at any, and what time, he had been in such custody: and if yes, in what manner, and by what means, he ceased to be so.

Art. 13. For prevention of vexation and impertinent inquiry, the keeper, before he makes reply to any such interrogatory, as above, may require the applicant to make himself known, to the purpose of eventual responsibility.

Art. 14. Any person to whom, by any such keeper, any such acknowledgment has been made, may repair to the judicatory of the district in which such place of confinement is situated, and there require of the judge that the person so under confinement may be produced before him, and that, at a public audience, inquiry be made into the cause of such confinement: which inquiry made, the person shall be remanded or set at liberty, or otherwise dealt with as the case may require.

Art. 15. What is here said of a prison shall be understood of any other place in which, whether according, or not according to law, the person in question is under confinement.

Art. 16. If, to avoid his being produced to the judicatory, as above, a prisoner is shifted from place to place, all persons concerned in such shifting, and conscious of its having that for its purpose, shall be responsible as for injurious imprisonment.

Section III.

Securities against injurious banishment.

Definitions. Injurious banishment is where, without, or otherwise than according to lawful sentence of a judicatory, a subject of the state is, to his vexation, by force, unlawful intimidation, or fraud, sent or kept out of the state, or any part thereof.

If out of the whole territory of the state, the banishment is external: if out of this or that particular part, internal.

The intimidation is unlawful, if the means employed be a threat of vexation by unlawful means, or even of lawful prosecution, for other cause than injury done to the individual by whom the comminatory intimation is conveyed, or to some individual on whose behalf he is entitled to prosecute.

Art. 1. Of any sentence of banishment, external or internal, pronounced by a subordinate judicatory, notice shall, by the earliest opportunity, be sent to the office of the head judge; nor shall the sentence be executed until confirmed by his signature; nor then, until thirty days after the sentence has been read in the Chamber of Audience.

Art. 2. Every person who knowingly and wilfully has been contributory to the injurious

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external banishment of any person, shall suffer imprisonment for a length of time equal to that during which such banishment shall have had place; and shall, moreover, to the extent of his means, be compelled to contribute to the furnishing compensation, in a pecuniary shape, for the injury.

Observations on the subject of preventive measures against injurious and secret banishment.

For security against secret and injurious banishment, two obvious measures of the preventive class present themselves: one is, prohibiting egress, without passports; the other is prohibiting egress without entry of the fact in the Official Register Book.

It may, perhaps, be too much to say that, in no state of things, either of these means ought to be employed; but what may be said, and with truth, is, that generally speaking, the evil of the remedy will be found to preponderate over the good. The state of things will be an extraordinary one, if, for one instance in which the egress is involuntary on the part of the individual, there will not be hundreds, not to say thousands, in which it is voluntary—say, for argument's sake, one thousand. Here, then, in the hope of saving, from the greater vexation, a single person, a thousand are subjected to the lesser. But, in the case where a passport is rendered necessary, neither in its length, nor therefore in its aggregate amount, has the vexation any certain limit. Power without limit, over every one who has need of the passport, is thus given to the functionary or functionaries, whoever they be, whose signature or signatures are necessary to the giving validity to it; and thus, for the sake of saving one from injurious banishment, a thousand are exposed to arbitrary confinement—confinement not the less vexatious for not being against law. In the case where simple registration is all that is required, the power of granting or refusing the passport not being given in a direct way, the danger of abuse may seem as if materially lessened, if not removed. It is not, however, by a great deal, so effectually lessened in reality as in appearance: for still, so long as the minute in question remains unmade, the confinement is as effectual as if the case had been that of a passport that had been delayed.

The argument from the security thus afforded has hitherto been supposed entire. This, however, it cannot be in any case: and the more uncertain the effect of it is, the less the utility absolutely considered, and thence comparatively, with reference to the vexation produced by it. The efficacy will depend upon the nature of the communication with other countries, and the efficacy of the means actually employed for keeping persons and things in a state of confinement;—true it is that exportation of another person against his will is not, in general, so easy to a man as the exportation of his own person, or of an equal mass of inanimate things.

Section IV.

Securities against secret and unlawful Homicide.

Art. 1. On the death of every person, except as excepted, notice thereof shall be given to the Iman of the parish within which the death took place; if in any dwelling-house, by the occupier thereof, or some other person in whose presence the death took place: if not in any dwelling-house, or the ground belonging to a house, and occupied therewith—as, for example, on a journey, if at the time any person or persons were present, then by some one or any of the persons present—if the person be found dead, then by some person by whom the body was found.

Art. 2. In every case in which it appears that in the production of the death of any individual human agency has in any shape borne a part, every person to whose mind or senses appearances tending to give probability to such an incident have presented themselves, is expected and required to give to his conception in relation thereto whatsoever publicity it may be in his power to produce.

Art. 3. To this end, after making inspection of the dead body, if it be in his power, with his own eyes, let him repair to the nearest mosque with all possible despatch, and communicate to the Iman such observations as he has made: to the end that this servant of God may take cognizance of the facts, and in case of immoral agency on the part of any individual, do whatsoever may be in his power towards the discovering and punishing of every criminal so concerned.

Art. 4. Having received such communication, the Iman shall, with all practical diligence, repair to the spot on which the body lies, and there make examination of the state of the body, and make inquiry in relation to the matter at the hands of all persons by whom appropriate information is offered, or at whose hands it seems capable of being obtained.

Art. 5. In taking such examination, let the servant of God proceed as follows:

1. Except as excepted, let everything done by him on this occasion be done as publicly as possible.

2. If, in regard to this or that person, he sees reason to suspect that on seeing what passes he may give information thereof to some person or persons contributory to the death, for the purpose of enabling them to escape, he may keep secret from such person anything that tends to point suspicion upon the person so suspected, until means have been taken for his arrestation.

3. Let him, in the name of God and his Prophet, adjure all persons so interrogated, to declare the truth, the whole truth, and nothing but the truth, in relation to the matter in hand, and that as well spontaneously, as in answer to all such questions as he shall have to put to them.

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4. In case of refusal to give information, or to make answer to this or that question, let him take note thereof; but if any allegation in justification of such refusal be made, let him make mention also of such allegation.

5. So if any means be used to evade giving such information.

6. So, if after promise to give it, such promise be not fulfilled.

7. Of the demeanour as well as discourse of every individual at whose hands testimony is required, as above, let him take account in writing, noting as correctly as possible the very words of everything that is said.

8. In the case of each individual so interrogated, let him read over to him what has been written: in every instance where it has been signified by the witness that the account so given by him was in this or that particular incorrect, and that it ought to have been so and so, let him make addition accordingly. But let him not on this account obliterate anything that has been written; for any contradiction that has place between any subsequent part of the testimony, and any antecedent part, may help to make known the truth.

9. At the end of the account thus given of each person's testimony, let him cause the witness, if able, to write his own name in confirmation thereof: if unable, let the servant of God write the name, and cause the witness, in confirmation thereof, to take the pen in hand and make a mark: and to this mark let him add in his own hand, or the hands of the respective persons, the names of the persons who saw the mark made: or of a competent number of them, choosing such whose attestive testimony may upon occasion be resorted to with least inconvenience in every shape.

10. If by any person present a desire be expressed that a question to this or that purport be put to any other person, in relation to this same business, let the servant of God, if in his judgment such question be not irrelevant, or on any other account improper, put the same accordingly on the number of the questions. If regarding the same as improper he decline putting it to the witness, still, if by him by whom it is propounded, or by any other person present, it be desired that entry be made of such request and refusal, so be it.

11. Of the names of all persons present during the examination of such witness, let entry in like manner be made, unless the number be so great that such entry would occupy too much time: in such case the number may be limited to twelve, unless the persons themselves desire entry to be made of their names: in which case, after those by whom no such desire has been expressed, have been entered to the number of twelve, entry may be made of those by whom the desire is expressed till the whole number amount to twenty-four. If by any person complaint be made of partiality in the choice, let note be made of such complaint, the servant of God following his own judgment notwithstanding.

Section V.

Securities applicable to the case of mysterious disappearance.

Art. 1. In case of unexpected disappearance of any person, if it be known or suspected that he is clandestinely kept in confinement anywhere, or has been secretly put to death, or by force or fraud sent out of the country: application being made on his behalf to the Cadi, or to any inferior judicatory, entry shall thereof be made in the Register Book of such judicatory, and means shall be employed for the recordation and notification of the fact, to the end that in the case of his being unlawfully confined, he may be liberated or otherwise dealt with; or if unlawfully transported, he may be brought back; or if unlawfully put to death, means may be taken for the punishment of all persons concerned in the commission of the injury.

Art. 2. Such application being made, the judge shall hear and make entry thereof in an appropriate Register Book of the Judicatory, and shall do whatsoever shall be in his power towards the causing notification to be made thereof throughout the dominion of the state.

Art. 3. At the request of any person so applying, the judge shall immediately deliver to him, or suffer him to take or cause to be taken, a copy thereof signed by the said judge. Copies in any number being taken of such copy, the judge shall, without delay, cause examination thereof to be made, and as soon as they have respectively been found or made correct, shall in like manner authenticate them by his signature, to the end, that, by the applicant, transmission thereof be made to all such judicatories and mosques, as the applicant shall be desirous of sending them to: whereupon, immediately upon the receipt of each such copy, the Iman of the mosque shall make publication thereof, by reading the contents to the faithful in full congregation assembled.

Art. 4. In every judicatory, in the office of which any such copy shall have been received, the presiding judge shall cause it to be kept in the archives, having, in the first place, made notification thereof in the promptest, and at the same time, in the most public manner that the circumstances of time and place admit of.

Art. 5. Attached to such *record of disappearance*, shall be an invitation to all persons having knowledge of any facts, tending to the discovery of the authors of the injury, or the causing it to cease if the party be alive, to repair to any judicatory, or to any mosque at their choice, there to testify what they know. Which done, the president of the judicatory, or the Iman of the mosque, shall, upon his responsibility, use such means as his situation admits of, to the forwarding to the proper judicatory the information so obtained.

Art. 6. The petition on which a record of disappearance is grounded, must be signed by

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some one person, namely, to the end that, in case of its being presented through malice, or otherwise without justification or sufficient excuse, the person presenting it may be responsible to the purpose of pecuniary compensation, with or without ulterior punishment for the vexation so produced. Such petition may be signed by persons in any number: and in such case, such signatures may be in lines one under another, or in lines forming the rays of a circle. The use of this radial form is, to save the individual principally concerned, from being more exposed than the rest to vindictive treatment at the hands of any functionary or other person, in whose breast the application might excite displeasure.

Art. 7. In so far as applicants are unable to defray the expense of copies and transmission, let the judicatory defray it out of any such means as it has in its power.

Section VI.

*Securities against Extortion of Personal Service.**

Art. 1. By no person, functionary or non-functionary, shall personal service in any shape be exacted of any individual, without giving him in writing a sufficient acknowledgment thereof.

Art. 2. In such acknowledgment shall be contained the particulars following, namely—

1. The name of the individual at whose hands the service was required.
2. The proper name and official name of the functionary by whom the service was required.
3. The particular nature of the service.
4. The nature of the exigency: *i. e.* of the demand or need which, on the public account, there was for the performance of such service.
5. The time, that is to say the year, month, day, and hour, at which the service was first required.
6. The time during which the service was required to be continued.
7. The willingness or unwillingness of the individual to render the service so required.
8. In case of unwillingness, the reasons, if any, alleged by him, why the service ought not at all, or ought not at that time, to be exacted of him.
9. The performance, imperfect performance, or non-performance, of the service so required.
10. Collateral damage, if any, inevitably sustained by the individual, by the performance of the service.

Art. 3. Of such act of acknowledgment let two copies be taken: one to be delivered to the individual, the other kept by the functionary.

Art. 4. On each of these let the individual signify his assent or dissent to the several statements therein contained, attesting the same by his name or his mark: his name, if he be unable to write it, being written by, or by order of, the functionary.

Art. 5. The nature of the service and the fact of the exaction of it being thus recorded, it will then be to be compensated for on account of government, or left uncompensated according to the nature of the case.

Art. 6. Let the act of acknowledgment, as to all particulars antecedent to the performance of the service, be made out and signed antecedently to such performance, or not till afterwards, according to the nature of the exigence: that is to say, according as this testimony can or cannot be given beforehand without prejudice to the service.

Examples of cases in which it may probably not be capable of being given without prejudice to the service:

1. Prevention, stoppage, or diminution, of damage by any physical calamity, such as that occasioned by fire or inundation.
2. Prevention, stoppage, or diminution, of damage to body or goods by delinquency in any shape—such as, killing, wounding, or beating, forcible depredation, destruction or damnification of goods, by internal rebellion.
3. Prevention, stoppage, or diminution, of damage, in the like shape by foreign enemies.

Art. 7. Where the nature of the service is such as to require that it be executed by individuals in an indeterminate number at the same time, no such act of acknowledgment need be given to each one of them.

Art. 8. But in this case let a general statement of the number be committed to writing by the proper functionary, and deposited either in the mosque or the judicatory within the district of which the matter happened, or both, as the case may require.

Art. 9. If so it be that this or that individual has, on the occasion of the performance of such service, received any material damage in body or goods, let note, with sufficient attestation be taken thereof, to the end that he may receive compensation in a pecuniary shape at the hands of government.

Art. 10. So if it be, that by the magnitude of hazard to body or goods, or by the success or energy of his exertions, it has happened to this or that individual to distinguish himself in an eminent degree, let note thereof be taken, and a duly attested copy thereof be delivered to him. In this case, if the degree of merit manifested be sufficient, let entry be made in an appropriate register to be kept in every mosque and in every judicatory. It may be styled *The Register of merit*, or *The Register of extraordinarily meritorious public service.*

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* Extortion of personal service may be considered as depredation; viz. to the amount of the profit derived from it on the one hand, and the loss or other sufferance produced by it on the other. In so far as to the individuals labour is a source of profit, forced labour is loss to an amount equal to the profit which in the time so employed by them might have been gained.

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Section VII.

Securities against Official Depredation.

Definitions.—Official depredation may have place at the expense of an individual, or at the expense of government,—that is to say, at the expense of the whole community, at whose expense the money employed in the service of government is collected. Official depredation at the expense of government belongs not to this purpose.

Official depredation has place in so far as any public functionary avails himself of the power or influence possessed by him by means of his office, to obtain from any person money, money's worth, or beneficial service in any shape, not having a right thereto by law.

The instrument whereby this offence is committed, may be either force, intimidation, or deceit.

Intimidation may be exercised by producing either the fear of some eventual positive evil, or the fear of failing to obtain the matter of good which the functionary had no right to prevent the individual from receiving.

Art. 1. Imposition of secrecy is evidence of official depredation. If on the occasion of the valuable thing or service received, intimation is by the functionary conveyed to the individual, that it is the wish of the functionary that the transaction should be concealed from anybody, such declared wish affords presumption of official depredation. The presumption, if the fact of the having given intimation of such a wish is credited, shall be regarded as provisionally conclusive.

Art. 2. If on account of any service or supposed service, rendered or supposed to have been rendered or to be about to be rendered to an individual, by a public functionary, by means or in respect of his official power, gift or service other than what is appointed and allowed by law be received by him, or to his use, or for any person specially connected with him by any tie of interest or sympathy, intimidation or corruption shall be presumed to have been exercised by such functionary: intimidation, namely by apprehension, lest evil in some shape in which it ought not to be inflicted by him on the individual, be so inflicted, or lest good in some shape in which it ought to be rendered to the individual by the functionary without such gift or service, should not be rendered by him accordingly: corruption, in the view of obtaining of the functionary, at the expense of the public, the matter of good in some shape in which it ought not to be so rendered.

Art. 3. In case of intimidation, the gift, or the equivalent of the service, may be recovered of the functionary or his heirs at any time within ( ) years.

Art. 4. In case of corruption it may be recovered for the use of the public treasury.

Art. 5. If by any public functionary, gift or service not due to the sovereign by law, be received or required of any individual, on pretence that it is for the sovereign's use or by command of the sovereign, the intimation by which it is asserted or supposed, that the sovereign issued any such command, or would receive any such gift of service if permitted, shall be deemed a calumny, and the functionary and every person willingly contributory to the conveying such intimation, shall be punished as the author of such calumny.

Art. 6. If on any such occasion, any writing to any such effect be produced, purporting to be authenticated by the signature of the sovereign, the same shall be regarded as a forged instrument, and the persons concerned in the exhibition thereof shall be punished as for forgery.

Art. 7. Provided always, that if the sovereign be pleased to appear in the judicatory, and in the face of the bystanders, declare that the signature was really his signature, in such case it shall be acknowledged as such, and all due obedience shall ensue.

Art. 8. Every functionary by whom, on account of any branch of the public service, money or money's worth is required at the hands of any individual, shall, on receiving that which is required, or any part of it, deliver to the person of whom it has been received, an appropriate instrument or writing, acknowledging such receipt. This instrument may be termed an *acknowledgment of receipt*, or in one word a *receipt*.

Art. 9. If no such instrument be delivered, the act of receipt shall be deemed an act of *official depredation*, or say in one word *extortion*.

Art. 10. Of every such receipt two copies shall be made. One of these shall be delivered to the person in whom the requisition is made as above; in it shall be written:

1. Name of the place in or at which the requisition is made—district, town, if any, and parish.
2. Time at which the requisition is made.
3. Official name of the functionary by whom the requisition is made.
4. Personal name of the functionary by whom the requisition is made.
5. Name of the individual on whom the requisition is made.
6. The subject-matter of the requisition so made.
7. The branch of the public service for which the requisition is made—for example, the financial, the judicial, or the military.
8. The time on or before which it is required that the thing in question shall be delivered.
9. The place at which it is required that the thing in question shall be delivered.
10. If the thing in question be delivered accordingly, mention of such delivery.

Art. 11. If lawful, such requisition shall be either specially or generally manifested.

By specially manifested, understand manifested by a requisition made to the particular individual.

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By generally manifested, understand manifested to all such persons as are within the description thereupon given—as, for example, all the persons in a certain district, or all the persons of a certain class whose ordinary abode is within that same district.

Section VIII.

Securities in favour of Private Writings: or Securities for the Writings or other Documents of Individuals, against wanton or oppressive Seizure, Destruction, Damnification, or Inspection, by Non-functionaries or Functionaries.

Art. 1. No writing shall, against the will, known or reasonably presumable of the owner, be carried or kept out of his custody or power, or be seized, destroyed, damaged, or inspected, by or by order of any person in authority: unless it be in pursuance of the order of a Judicatory.

Art. 2. Such order may be either subsequently to the definitive sentence pronounced in a suit or cause, and for the purpose of giving effect to such sentence, or antecedently to such sentence, and for the purpose of furnishing due grounds for it in the shape of evidence.

Art. 3. In case of such oppressive seizure, destruction, damnification, or inspection, any person concerned in the infliction of the injury shall be responsible to the purpose of pecuniary compensation, with or without ulterior punishment, as the case may require.

Note, that the evil produced by such injurious inspection is capable of wearing any shape in which evil to any person or persons is capable of having place:—in his person, in his reputation, in his property, in his condition in life: in any of these ways an individual is liable to be made a sufferer from such a cause.

Art. 4. If, by any illegal means, writings be obtained contributing to the proof of any offence, the illegality of the means shall not have the effect of exempting the possessor from the punishment adapted to the offence: but in the adaptation of the punishment, any evil suffered by him in consequence of the inspection thus obtained of any other writing, shall be considered.

Art. 5. So, in the case where, as between two parties who are in a state of dispute with relation to a certain right, a writing having for its tendency the giving effect to the claim of one of the parties, and which, as such, the other ought to produce, or to have produced, has been obtained by illegal means: that is to say, without sufficiently and properly issued warrant. But if it be by wilful falsehood in any shape that the writing has been obtained, all persons concerned shall be punished for the falsehood: and the party, if privy to the falsehood, shall not have the benefit of the evidence so obtained. But care must be taken, lest, he not being privy to the falsehood, a false friend should, by obtaining it by means of falsehood, deprive him of the benefit of it.

Art. 6. If, by legal means employed for the purpose of obtaining evidence of this or that act of delinquency, or of the correspondent non-delinquency, or in respect of this or that particular right, writings or other documents capable of serving as evidence respecting any other supposed offence or right, be obtained, the evidence thus obtained may be employed accordingly. But if, in this way, possession or inspection has been obtained of writings or other documents, by the publicity of which evil in any shape has been produced to any person, without service rendered to justice in any shape, as above: for such evil, all parties concerned in the production of it shall be responsible to the purpose of reparation or punishment, or both, as the case may require.

Art. 7. If, for the purpose of producing serious evil by disclosure of writings or other documents, evidence not applicable to any other than a trivial offence or a trivial right be obtained, although it be by legal means, all persons knowingly concerned in such inspection or divulgation, shall be responsible to the purpose of reparation, or punishment, or both. But from the punishment, deduction may be made proportioned to any such real good as shall be deemed to have been produced by the production of such evidence.

Example. For the purpose of causing a person to be disinherited, or otherwise made to suffer by an over-severe or capricious father, husband, or master, an adversary obtains by legal means, in company with documents applicable to the purpose of a trivial offence or right, others which, by means of some exaggeration, produce the evil effect intended, as above.

CHAPTER V.

HOPES OF SUCCESS FOR ANY PROJECT HAVING SUCH SECURITIES FOR ITS END.

Section I.

Value of the Concession on the part of the Sovereign.

In the first instance, all that to this effect can be done by the sovereign—all that can be asked for at his hands—is resolveable into one thing—promises. Towards the performance of these promises, all that can be done in the event of a violation of the promises is, the procuring notoriety for the several acts by which such violation has been effected.

Everything I say that he can do on his part amounts to a promise, and nothing more. If, for example, he grants a representative assembly, what he thereby does by such grant amounts to a promise to suffer the deputies to be elected, and to meet, according to forms of their own choosing, or forms recommended by him, as the case may be. If, in the case of such invitation or permission, he makes a de-

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claration or assurance that, in the event of their meeting, he will not thenceforward give, or endeavour to give, execution and effect to any laws to which they have not given their consent, whether antecedently to their receiving his sanction or not till afterwards: here again is another promise or set of promises.

If what is obtained of him consists of edicts, interdicting the exercise of any acts by which, in certain ways therein mentioned, men are made to suffer in their persons or their property, by whomsoever such acts may have been exercised,—in this again is comprised a promise, not only to abstain from such acts himself, but to punish without exception all persons by whom they shall be or have been exercised.

As a security, and that a necessary one, for the performance of this primary class of promises, comes a sort of secondary class of promises, having for their subject-matter in the event of any violation of these promises, the suffering the giving execution and effect to a set of mandates and permissions, having for their object the giving to every such infraction notoriety to every extent possible.

If, notwithstanding these promises, explicit and implied together—promises engaging not to give any such predatory or other oppressive orders, orders to that effect are given by him, here again is another instance of violation of promise on his part. If, notwithstanding the correspondent order to the citizens of all classes not to exercise such acts of violation, acts of that sort are exercised, and he omits to give the requisite orders for appropriate prosecution and virtual punishment,—if to any exertions made by the injured parties, or others, for the purpose of instituting and continuing such prosecution until sentence be pronounced, and if condemnatory, executed, he, by himself or others, opposes obstructions in an immediate and declared, or unimmediate and undeclared, way—obstructions to any endeavours used for bringing about such punishment; —here again is another violation of promise—another instance of perfidy on his part.

Still, in all these cases, everything that is done by any person other than the sovereign himself, consists in an appeal made to public opinion: of everything that is thus done or endeavoured at, the success depends upon the spirit, the intelligence, the vigilance, the alertness, the intrepidity, the energy, of those of whose opinions the public opinon is composed.

As everything depends upon public opinion, so does everything depend upon notoriety—notoriety as above to ordinances, transgressions of these ordinances, and suffrages. And note here, with regard to transgressions, that be the instances of violation ever so frequent, it follows not from such frequence that the ordinances in question have been altogether without effect; much less that in their own nature they are inefficient and nugatory. This may be exemplified in the case of the ordinance whereby assistance given to a person engaged in the commission of this or that act of oppression is declared to be criminal, and as such punishable, resistance to it lawful and not punishable.* Antecedently to such concession, any person by whom any such act of oppression was witnessed, would regard it as lawful, and be without hope of any punishment being inflicted on any person concerned in it. Suppose, on the other hand, the concession and the virtual promise contained in it made, every one would, in the first instance, and unless taught the contrary by experience, entertain the expectation and hope of seeing it observed: and in pursuance of such hope, individuals might rise up with one accord, and concur in opposing effectual resistance: individuals into whose conception, but for such ordinance, no idea but that of obedience would have entered.

This view of things—this hope—this estimate of the usefulness of solemn monarchical promises, how flagrantly soever violated, is confirmed by all history—by the history of all nations in which they have been made.

In England, for example, take the instances of Magna Charta, and the Bill of Rights, as already referred to: Magna Charta, dating near the commencement of the thirteenth century of the Christian era, the Bill of Rights towards the close of the seventeenth. Abundant and frequent have been the violations of both these clusters of promises: yet is it to them that the English are indebted for every security against misrule—for every abstraction from misrule by which their condition is distinguished to its advantage from that of the inhabitants of the continent of Europe.

So in France. Take, for instance, the charter which the conquering despots forced the people to receive at the hands of the reigning Monarch. The security miserably inadequate —the principle upon which it is grounded, a security for, not against, misrule. The lot of the whole people declared dependent upon the arbitrary will of a single one of them. He, by his situation, rendered, in every intelligible sense of the word worst, the worst of all of them. On every occasion, he would be instrumental in sacrificing the interest of these thirty millions of his fellow-countrymen to his own sinister interest and caprice; yet such is his benevolence, that cases are mentioned by him in which he promises, so far, to keep a restraint upon his desires, as to forbear from making the sinister sacrifice. Each moment he would be warranted in taking all they have; yet such is his generosity, that, of the fruit of each man's labour, there is a part which, in so far as it may happen to the promise to be observed, he may keep. Even of this scandalous provision, insulting and grossly inadequate as it is, the violations are incessant. Still, however, under this so inadequately bridled mixed monarchy, the lot of the people is less disastrous than un-

* See chap. iv. Sect. 2, supra p. 585.

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der the despotism by which the Revolution was produced.

Section II.

The probability of the Sovereign's consent abstractly considered.

The question concerning the probability of consent on the part of the sovereign was brought to view at the outset: it has never been out of remembrance. Unfortunately, having, as they have, for their object the applying limits to his power, the greater the efficacy which the several proposed arrangements would have, on the supposition of his consent, the less sanguine the hope of its being obtained cannot but be. As to this point, such as they are, they must take their chance. That hopes have place, that to the purposes here in question he may be brought to bestow upon the people a benefit so transcendant and so unexampled, is a *datum* without which the work could not have been undertaken.

In form and tenor, the object has been to render what is done as little offensive to the feelings of a man in the situation in question as the nature of the case can admit of its being: of misdeeds and misdoers, a description in the several cases is given: if so it be that it is his will and pleasure to give himself a title to that appellation, there is no help for it; but to him, personally and individually, it is not, on any occasion, applied.

If to stop the course of justice be his will and pleasure, so it must be: all that could be done is, so to order matters, that the security thus endeavoured to be afforded, cannot, in any case, be taken away without its being seen by, and known to, the people that it has been taken away, and that, by taking it away, he is stopping or perverting the course of justice.

Not only so, but matters are so ordered as that, unless, in so far as special injunction of secrecy has been communicated, whatsoever has place is, by the general means of notoriety, whatever they are that have been provided, made notorious: to wit, according to the degree of notoriety, whatever it be, which, by these same means, has been established.

But, in all internal concerns, at least, not to speak of international ones, secrecy in the acts of constituted authorities, or in the circumstances in which they have been performed, affords a presumption,—and indeed, with the exception of certain cases to a comparatively small extent, which may, without difficulty, be distinguished and declared, amounts to a confession,—of guilt, of moral and political guilt: a confession, that the promotion of some sinister interest, and not the universal interest, is the object of what is done. A confession of this sort, neither the sovereign himself, nor any subordinate of his, will willingly be seen to make.

A bit of some sort or other, and that an effectual one, the courser must have in his mouth: the object is to render it so soft and smooth that, as far as possible, it shall be imperceptible. Accordingly, whatsoever be the obstacle, on no occasion is it to the person of the sovereign that it is opposed: not to him, either by name or description, but to the person concerned in the vexatious practice, whatsoever it may be. And the practice being not only vexatious, but, with reference to determinate individuals, plainly injurious, that the sovereign should, in his own person, be an actor in the injury, can scarcely, in decency, be supposed by anybody, nor will it be expected of them arrangements that they should have any such supposition for their ground. The injurious act being brought to light, whatever disrepute attaches upon it will attach, at any rate, in the first instance, upon the instruments which he employs. On them he will see it attaching: and on them, on the supposition of its not coming home to himself, he will, without much concern or resentment, as towards anybody, so long as it is not seen by him to come home to himself, see it attach. For its not doing so, he will naturally be led to trust to the splendour that environs him, and to the delusion and awe which it inspires.

To a certain degree, what he thus relies upon will take place: but, in the meantime, of a fund of discontent in the breasts of individuals not known to him, and therefore not exposed to punishment, symptoms will be continually breaking out. By the obscurity of the source, danger, in the eyes of him on whom it impends, far from being diminished, is magnified; and thus it may be that, upon the whole, he will find his situation more comfortable by abstaining from injury, than by indulging himself in it. Compared with a set of provisions, bearing expressly upon the person of the sovereign, opposition in this mode will be analogous to that which, in machinery, is opposed by friction, compared with that which is produced by an opposing bar.

Accustomed to contemplate all objects in a general point of view, the draughtsman has had some advantages over the sovereign, who, in his situation, is not accustomed to the labour of regarding them in any other than a particular point of view. By the legislative draughtsman, the objects that belong to the occasion will be seen, all of them, in a general point of view.—The vexations which, whether in the shape of simple vexation, or in that of depredation, a man in the situation of the sovereign cannot fail, upon occasion, to conceive the desire of practising: the instruments and other favourites, whom, whether on their personal accounts respectively, or in virtue of their common relation to him, as being part and parcel of his property, he will be disposed to let into a participation of these his privileges, (in some instances beforehand, and in the way of previous license, in all instances in the way of impunity, in the event of any endeavours used to call them to account;) so, on the other hand, the resentment which, by any endeavour or

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so much as a disposition on the part of the person injured to obtain remedy or so much as relief, can scarce fail to be handled in a breast so situated.

To the eyes of the sovereign himself, no such extensive views will naturally be present. When the means of securing notoriety to his proceedings are proposed to him, if so it be that there exists no particular act of depredation or vexation in any shape that he has conceived the desire to commit, he will not be forward to suppose that there will be any such in future: he will not be forward to suspect to himself a disposition, which, even in his own instance, he could not regard as altogether free from blame.

If so it be that no individual instrument or favourite to whom, in respect of any particular instance of depredation or oppression he would like to afford license or impunity, happens to be in the moment in his eye, it will not be agreeable to him to look backward to past instances of any such undue favour, or forward to future contingent ones. If so it be that there exists no particular individual against whom, by the audacity of his endeavours to obtain remedy or relief his resentment has been kindled, he will not find much satisfaction in any such supposition as that of his being angry without just and sufficient cause. Not that in his situation advisers to whose situation reflections of a general nature are more necessary, are likely to be wanting—advisers by whom representation will be made of the danger, with which improvement in any shape, and particularly in the shape here in question cannot but be pregnant: nor therefore does there seem any great ground for hope, that without more special and particularly strong impulse, a concession so unexampled and naturally so revolting to ruling pride, will be submitted to. But be it what it may, this chance is the only one: which being the case, no argument against the taking it can be derived from the smallness of it.

Such as above being the securities proposed as presenting the fairest promise in every point of view, natural consequences if conceded, and probability of success taken together—only in proportion as they apply a restrictive check to the accomplishment of the sovereign's will, only in proportion to the extent to which they operate in this direction, can they be productive of any of those salutary effects for the purpose of which they are proposed. But the idea of any effectual opposition to his own will, in whatsoever direction operating, is an idea to which, in a mind so situated, more pain is attached than can be outweighed by the consideration of any particular pleasure that he may be capable of deriving from the contemplation of any particular good effects, of which the creatures subject to his power must receive their share, before he receives his: their share being at the same time, if taken in the aggregate, much greater than his. His situation is as to this matter that of the infant with his physic—some years must have passed over his head before any such remote contingent and imperfectly conceived event as the cessation of the suffering he is enduring from the disease, can form of itself an adequate inducement to be freely and voluntarily instrumental in afflicting himself with the pain so certainly and immediately attached to the nauseous dose.

The chance of the requisite concession is not equally small in all imaginable cases. To obtain security against vexation in all its shapes, and at all times against all persons, but more particularly against all persons who have it most particularly in their power to produce it, is the object of these arrangements: more particularly against vexation at the hands of the sovereign and those in authority under him: vexation for the gratification of their respective appetites and passions.

The classes of persons at whose hands it is most to be apprehended are—1. The sovereign himself. 2. The sovereign's favourites. 3. The several functionaries under him considered as being on every such occasion employed as his and their instruments for his and their personal gratification: so these same functionaries considered as being in a condition to employ their power in the production of vexation and oppression, for their own gratification and supposed advantage.

To vexation of this latter description, so far as confined to this latter purpose, the sovereign will not naturally have any considerable aversion: what may be the sufferings of the people taken at large will on this occasion, as on every other, be to a mind so situated a matter of indifference: against any sentiment of sympathy of which they may be the objects, will be to be set that portion of sympathy which has for its object the enjoyments of a select set of men, who being in a more especial manner in his service, belong to him by a nearer and dearer tie than the members of the community at large, removed as they are from his sight and his cognizance. If there be anything by which his sympathy can be turned in favour of the people, it must be a species of fear: fear of the unpopularity that by possibility may be turned against his own sacred head, by the consideration of the connexion that has place, between himself and those creatures of his will—the oppressors, whose power of continuing the oppression, a word from him would suffice to terminate.

If then, according to his calculation, any dissatisfaction produced by the divulgation of instances of oppression, will on every occasion take them and them alone for its object: if it will not rise higher: if it will not rise so high as to reach his own person, or those of his more especial favourites: in such case no very urgent inducement may be necessary for obtaining his consent. In Tripoli, as in England, if at any time he can make the people quiet, by the sacrifice of a set of instruments in which

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no special favourite is numbered, a comparatively small inducement—a comparatively slight degree of apprehension may suffice. Turning out this set, and taking in a different one, he may, through their instrumentality, go on in the same track, beginning only a new score. Turning out a set of Tories, he may go on playing the same game with a pack of Whigs.

Section III.

Inducements by which, in the situation of Sovereign of Tripoli, a man may be engaged to concur, and take the lead in the proposed change.

1. Inducements purely self-regarding—inducements applying to him in his personal capacity,—to his purely self-regarding interest.

Person, reputation, property, domestic relations, condition in life; in respect of one or more of these possessions, if in any way, in the situation in question, as in any other, will a man's welfare or condition be affected, whether it be in an advantageous way, or in a disadvantageous way.

1st, As to person. Under the existing state of things, the person of the sovereign is in a perpetual state of insecurity. To individuals in an indefinite number, inducements for attacking his life are continually presented by both branches of human appetite, the irascible and the concupiscable. Under a form of government, such as the arbitrary one still in existence, as in all former times, oppression in all its shapes cannot but be matter of continual practice. Of every injury thus sustained, the sovereign presents himself to the view of the injured party as the author. In most instances this will be an erroneous view: but in a more or less considerable number, it can scarcely fail to have more or less of truth in it. So imperfectly defined under such a form of Government are the boundaries which separate right and wrong: in particular, those by which rightful occupation is distinguished from depredation in whatsoever way committed,—whether without consent and by force as in the way of taxation, or with consent, and by a sort of fraud, as by taking up goods in the capacity of a purchaser, but without ever paying for them.

Thus much as to the provocation offered to the irascible appetite, in the case of a boundless multitude; a multitude to which, at any rate, there are no bounds but those by which the population of the country is circumscribed.

Now, as to the provocation offered to the concupiscable appetite. The sovereign not having at present any established and regularly disciplined military force for the security of his person, nothing but an uncertain number of irregularly armed retainers and irregularly and unequally paid domestics, the sovereignty presents itself at all times to the eyes of a man of ardent ambition or desperate courage, in the character of a prize which awaits the hand of every man who has the spirit to put in for it. In the situation in question, were it possible for a man to have any hold on the general affections of his subjects, this hold might be a sort of security to him, a sort of discouragement to every man of adventurous disposition, who would feel disposed to put in for the prize. But no such possibility has place. By any considerable body of men who would embark together for the purpose on the principle of equality, or by a handful of men, if tolerably well trained and placed under the command of a single adventurer, induced by regular pay, by hope of plunder, or by personal attachment, the miscellaneous unarmed and irregularly and unequally-paid body of his present defenders might at any time be overpowered, and an end—a violent end put to the sovereign's life.

2. Reputation. In this particular, the advantage which invites his acceptance is, it will be seen, altogether matchless. But before any thing of detail under this head is brought to view, there will be a convenience in carrying on the inquiry through the other heads that have been mentioned. Under this head, suffice it to observe, on the present occasion, that with a man in such a situation, anything positively good in the way of reputation can scarcely in the general case find a resting-place. Whatever there may be to which this appellation can apply will be rather of the negative than of the positive cast;—such a man has in such a situation done rather less mischief than such another man. Thus, in respect of this endowment, a man has everything to gain by the change, nothing to lose.

3. Property. Under the present form of government, if in the hands of every inferior possessor, property in all its shapes is in a state of insecurity; in the hands of the superior possessor it can scarcely be said to be in a much better state. The desires of the man, whoever he be, by whom the situation of chief ruler is filled,—the desires of this man, whoever he be, being continually out-running the means of satisfying them, the agents employed by him in the collection of his dues are continually upon the alert for occasions and means of adding to the amount. But, in such a state of things, while on the one part there is a constant endeavour to grasp at more than has been wont to be received, so, on the other part, there exists a correspondent endeavour to withdraw from the grasp of the depredator as much as possible,—not only the more and more, continually demanded, over and above what has been habitually received, but likewise as much as possible of that which has hitherto been received. The consequence is, that in the midst, or by means of this conflict, security is banished from both sides.

In the midst of this conflict, less than he has at present, he may have to any amount, more he cannot have unless his subjects have

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it to give to him: and his subjects are at all times prevented from having any more to give to him; prevented by that state of insecurity which is inseparable from their condition. He is indigent, because they are indigent under the existing form of government; their indigence, it will be seen, is perpetual and incurable: therefore so is his. But on this subject there will be occasion to say more presently.

4. Domestic relations and condition in life.—To this head may be referred the uncertainties and anxieties which besiege the monarch in his character of father. The prospect of a bloody contest between his sons as being about to have place whenever his own life is at an end. In every Frank monarchy the order of succession is clearly fixed: no such apprehension as that of a civil war from any such cause has place. In the dominion of Tripoli the order of succession is not fixed, and in the existing state of the family, that which in almost every other country would be one of the severest curses, is even a blessing. Of his three or four sons, the eldest on whom men's eyes would naturally have fixed themselves in the first place, is at present generally regarded as being decidedly unapt for reigning, by the flagrant atrocity of his disposition. This generally, and at present: but when the existing sovereign has quitted the stage, who can say for certain what turn men's minds, the minds on which such things depend, may take. What an incitement may not such an occasion be, for some ambitious desperado to come forward and collect a party, for the support of the natural or rightful heir to the monarchy, whose sins he will pronounce expiated by the disgrace he has endured, and whose disposition has been molified and cured by the lessons which, from the silent hand of adversity he has received.

II. Extra regarding inducements.—Inducements applying to him in his social capacity, viz. in so far as his prosperity is dependent on that of the people.

The same division, the same heads of inquiry that served in the case of his personal interest, will serve now in the case of his social interest.

In this case, however, the survey will have little need to touch upon any of the above four points, other than that of *property:* of property which, in this case, receives the name of the matter of National Wealth. In so far as, in respect of personal condition, reputation, or condition in life, the lot of individuals at large considered as members of the same community, happens to be an object of interest and solicitude to him, it is well: but in this case it is to his sympathetic affections and not to his self-regarding affections that the interest applies.

Remains, then, as the sole remaining subject of consideration in the character of a source of inducements to the sovereign to give the consent in question, the Article of National Wealth.

So far as regards hope of increase, nothing can be more intimate than the connexion between the interest of the sovereign and that of his subjects taken in the aggregate; no object more strictly dependent upon another than is his opulence upon their opulence.

In the existing state of things, under the existing form of government, the sovereign has at all times extracted from his subjects as much as was capable of being extracted from them. In this state of things, all ulterior increase to him without increase to them being hopeless, remains as the only source of hope in regard to increase to him, such increase whatsoever it may be, as may be derived from a correspondent increase to them.

But under the existing state of things, any very considerable increase of wealth to them is impossible: all such increase is altogether dependent on a general sense of security. No considerable increase of wealth can take place but by means of a proportionate increase of capital. But no considerable increase of capital employed in giving increase to the generality of growing wealth, can take place without a proportionate and correspondent increase in the sense of security. Capital is money, or money's worth, laid out in large masses in the hope of reimbursement, with an increase at the end of a length of time, more or less considerable,—say six, eight, or ten years: or even without hope of reimbursement, on the condition that the returns each year, though perhaps not more than a twentieth, or five-and-twentieth, or thirtieth of the capital advanced shall be perpetual and transferable. Whatsoever money or money's worth a man has in store, over and above what serves him for the current consumption of the year, if he cannot obtain security for any return that might otherwise be expected from the employment of it, he will either hoard it up as a stock to serve him in case of casual demand on the score of distress by loss or otherwise; or if he employ it, he will employ it in some other country—employ it, that is to say, either in giving increase to the quantity of national wealth in some other country, or, what comes to the same thing, in an indirect way; namely, by occupying the place of an equal quantity, which may be drawn off from that destination, and thus giving increase to the quantity of national wealth in that same country as above.

But by any such sense of insecurity, not only will capital be prevented from being so employed as to increase the stock of national wealth in the country in question, but it will be prevented from coming into existence: the adequate motive, the inducement for giving existence to it being wanting. By the sight of the external instruments of enjoyment or felicity, in all their several shapes, every human being is in a state of constant temptation, solicited by these as he is to make acquisition of them, and in the way of consumption employ them according to their several qualities and destinations. All without exception are perpetually operated upon, and stand exposed to the tempta-

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tion. For, indeed, not one in a thousand is in a way to conceive the idea of employing capital in the purchase of foreign securities. Not many have the self-denial to sacrifice in any such way to any considerable extent the present to the contingent future: a future, which even in a state or country of the greatest security, is seldom estimated so high as it is worth, and which, in a country such as this in question, is worth so little in comparison with what it is worth in countries where subjects enjoy a very considerable and efficient security against all irregular and unserviceable exactions by the hand of government, however it may be as to regular and serviceable ones.

Thus temptation has in every state of things two branches: one is that which is presented by the love of enjoyment in the several shapes in which it is afforded by the several instruments of enjoyment according to their several natures; the other is that which is constituted by the *aversion to labour*, or say, by the *love of ease*.

This impossibility of any considerable increase of wealth to the nation, and thence to the sovereign, without a correspondent increase in the article of security,—security against misrule, the force of the arbitrary power in the hands of the sovereign, will appear the more plainly in proportion as the several sources from which the matter of wealth is capable of being extracted, are the more particularly brought to view.

Capital may be employed in giving increase to the quantity of growing wealth in either of two ways or situations: namely, 1st, In the hands of individuals acting singly, each employing his capital on his own single account; 2nd, In the hands of individuals acting in associations more or less extensive, the capital being collected from a number of hands more or less considerable, and according to the magnitude of the concern, employed either by the same hands by which it is supplied, or by a lesser number of hands chosen and appointed by the united suffrages of those by whom, and for whom, it is employed.

With the first of these two states of things, as being the more simple, let us commence the inquiry; the other will be understood from it of course.

The first most extensive and most obvious source of increase to wealth,—is labour employed immediately upon land.

In this case insecurity may attach upon it in two ways, either or both of them: namely, 1st, Upon the undisturbed possession of the land itself; 2nd, Upon the undisturbed possession of the growing produce. The most intensely and extensively operative cause of insecurity and of the sense of insecurity, is that which affects the title to the land; the title to the perpetual possession, or the title to the assured possession of it for a fixed and ascertained number of years, as the case may be.

Wheresoever the title to the land may be deficient, either in respect of certainty, or in respect of permanence, the inducement to expend any capital in the improvement of it, will experience proportionate diminution.

In Tripoli, the title to the land itself is everywhere more or less exposed to hazard and loss from two sources: 1. From the arbitrary power of the sovereign; 2. From attacks in the way of litigation by individual counter claimants.

In the case of lands in general, for the sovereign to take forcible possession of them, without other ground or cause assigned than the absoluteness of his power is, it is believed, not a very ordinary occurrence. Still, however, he that can do anything whatsoever that can be done by power, can of course do *that* whenever he pleases.

Improvements having land for their immediate subject-matter, will apply either to the surface or to the interior.

Improvements applying to the surface, will apply either to the soil itself, or to its boundaries, or to its means of communication.

Improvements applying to the soil itself, will consist either of the addition of manures, or of the addition or subtraction of water.

Manures are either texture-improving manures or aliment-supplying, say in *one word* alimentary manures.

Improvements having respect to water, operate either by the subtraction of it, when in too great quantity, that is to say by drainage, or by occasional addition to it, that is to say by irrigation.

Whether it be to be excluded by draining, or occasionally introduced for the purpose of irrigation, capital, to an amount more or less considerable, must, it is evident, be expended: capital, the returns for which will be more or less distant and uncertain.

Boundaries are either, 1st, For mere demarcation, *i. e.* showing where property ends; or, 2d, For exclusion of objects, the entrance of which would produce annoyance.

These are, 1. High winds, *i. e.* air when in a certain degree of agitation: 2. Animals wild or tame: 3. Human beings, at whose hands depredation, destruction, or deterioration are apprehended. Boundaries, having any such exclusion for their object are styled *fences*.*

Some animals there may be, for the sufficient exclusion of which, in some situations and circumstances, no very considerable expenditure of capital may be necessary. But in other instances the expenditure necessary for this purpose, even where this is the only one, may be very great.

* In bringing to view improvement in the several shapes, the object is to render it manifest, that, saving exceptions to a very inconsiderable amount, improvement cannot be made without an expenditure of capital; of capital mostly to such an amount as to require several years of successful labour for the reimbursement of it, with adequate profit correspondent to the degree of retardation and hazard.

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As to human beings, of fences sufficient for the exclusion of depredators and deteriorators in this shape, the expense cannot, in any situation, fail of being very considerable. For the effectual exclusion of them, if absolutely determined to gain entrance, no expense, how vast soever, can, it is evident, be sufficient. In the making of fences in this view, a sort of calculation sufficiently obvious, is of course made: on the one side, is set down the estimated value of the damage apprehended from such intrusion, on the other hand, the estimated expense of such fence as will in general be sufficient: sufficient to overbalance the net profit looked for by an intruder after deduction of the value of the burthen, composed of the labour and physical hazard of the enterprise, combined with the eventual evil apprehended in the case of detection and punishment.

Now as to the interior of the earth. Say, in the English phrase, the bowels of it: meaning in general whatever masses of matter lie within the surface down to which vegetation extends.

Extensive portions of the matter of the earth considered in this point of view, are called *mines*. Such portions as are regarded as consisting of earth concreted into a stony hardness, and not containing metallic substances in any proportion worth regarding, are, in English, distinguished by a particular name, *quarries;* and so in other languages.

When separated from other substances, the several different subjects of the mineral kingdom as it is called, exhibit differences in value upon a scale of prodigious length: witness at the one end of it, diamonds and other glittering stones, deriving value from their splendour combined with their rarity: at the other end, clay, sand, lime, and coal. Not, however, from the value of the species of the matter when obtained separately, is the value of the mine that affords it to be estimated, but to that circumstance, combined with the quantity and quality of the labour employed in effecting the separation, and conveying the matter in its separate state to the several places where it is put to use. Taking all these circumstances into consideration, the working of a diamond mine, or of a gold mine, may, instead of the most lucrative of all mining concerns, be a losing one, and such in many instances it actually has been. Witness, for example, Brazil; as may be seen in Mr Mawe's interesting travels in that interesting country.

On the other hand, not only coal and chalk, but even clay and sand, may be, and in every well cultivated country actually have been, and continue to be, extracted with considerable profit. Witness the clay extracted for porcelain and other pottery.

In England in particular, coal, a substance, which from the vegetable has, by lapse of time, past into the mineral kingdom, has, for centuries past, constituted the foundation of vast opulence to numerous families: opulence, in masses superior to any that are to be found in Tripoli, of whatsoever materials composed.

As to stones called precious, and the metals called by way of distinction precious, although they are capable of existing in such quantities, and under such circumstances as not to pay for the labour of extraction, yet they are also capable of existing, and accordingly have been found to exist, in such proportions and under such circumstances as to afford a greater rate of profit than any other ingredients in the composition of the earth's interior. Hence it is, that by men in general, and in particular by men armed with power, they have been in all times, and in all places, regarded with peculiar avidity. Accordingly, mines in which gold has been found, and mines in which silver has been found, have in many, perhaps most countries, been by law and practice, in whose soever land, and by whomsoever discovered, declared sacred to the use of the sovereign: too valuable to be capable of passing into any subject hand.

In general, before the peculiar precious substance can be found in any very considerable quantity, it becomes necessary to penetrate to a depth where vegetation ends. Here and there, however, exceptions to this rule have been found: gold in particular has, in large quantities, been obtained by extracting and sifting the earth found at the bottom of shallow rivers. As to silver, in the mixed masses in which it is contained, it has been found in a great variety of proportions: in some instances, in a proportion so large, that every other metal mixed with it has, in the course of the extraction, been driven away and sacrificed to it: in other instances, it has been, as it were, drowned in the less precious metal: and the less precious metal has been sold at a price no higher than what would have been asked for it, had no silver been combined with it. In particular, this in many instances has been the case with lead in England.

In the case of a mine in which silver is thus found, in combination with a metal inferior in separate value, unfortunate may be the condition of the proprietor, who has expended a capital in the extraction of it. Sooner or later enters the agent of the sovereign and says—this mine is a sacred one: sacrilegious the subject-hands that have employed themselves in the working of it: there must be no more such sacrilege.

So much for the surface of the earth and its interior, as an illustration in detail of the ends to which capital might be employed, were the system of securities established. Of undertakings for private or public benefit, requiring the permanent employment of capital, the following may be held as a general enumeration:—

1. Manufactories of articles suitable to the local wants and means of supply.

2. Means of communication, such as roads, canals, bridges, improvements in the facilities

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for communication afforded by rivers; source of profit, money in the shape of tolls.

3. Reservoirs for the preservation of a supply of water in extraordinary dry seasons: for example, by wells dug in apt places, and water raised from them by horse-power or a steam-engine.

4. Embankment of rivers in their course for the purpose of irrigation, or for giving motion to mills.

5. Erection of a prison on the Panopticon plan for deriving profit from the abour of prisoners.

6. Digging of mines: extraction of useful mineral substances of various kinds from the bowels of the earth, when, by the use of boring machines, as directed by geological observation, their residence has been discovered. To conduct it with advantage, an enterprise of this sort commonly requires large advances in the shape of capital.

But to this end all claim to the absolute ownership of mines, on the part of the sovereign, in grounds belonging to individuals, must be solemnly given up. By such surrender he might profit to an indefinite amount, and could not lose anything; for the effect of such claim is neither more nor less than that of an interdiction, prohibiting the working of any such mines. It would remain for consideration whether any profit could be derived to the sovereign from a tax upon the produce of such mines.

In conclusion, supposing the system established, the government, and, above all, the sovereign at the head of it, would be illustrious among all, and even above all the sovereigns of Europe and the other parts of the Christian world. By the supposition, the change is not only on his part altogether voluntary, but it is his own work. By the supposition, this being the truth, there will be no difficulty in making it known that it is so. All the circumstances by which it is transacted will be conveyed to England, and blazoned forth in the English newspapers: from which they will find their way into the Anglo-American United States, and, in the meantime, to the liberal French newspapers, if, with any tolerable hope of safety they can be published there.

Coupled with this intelligence, would be that of the encouragement given to the useful arts and sciences of modern European countries, by the translations made of writers of that class into Arabic, and the lectures read in the Tripolitan Universities.

These circumstances, taken together, would constitute as it were, a *pump for capital*: a pump by the force of which, capital would be drawn into Tripoli from all countries in which it overflows.

By curiosity, and the desire to see the country in which such moral wonders had been wrought, travellers from other countries, but from England in greater numbers than from all other countries put together, would be drawn to Tripoli; and as none of them would go thither without money in their pockets, here may be seen another channel through which capital would flow into it: and with it those comforts which are habitually enjoyed in other countries, and are yet unknown in Tripoli.

END OF VOLUME VIII.

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